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# Sub-Saharan Africa

## Situation and Outlook Report

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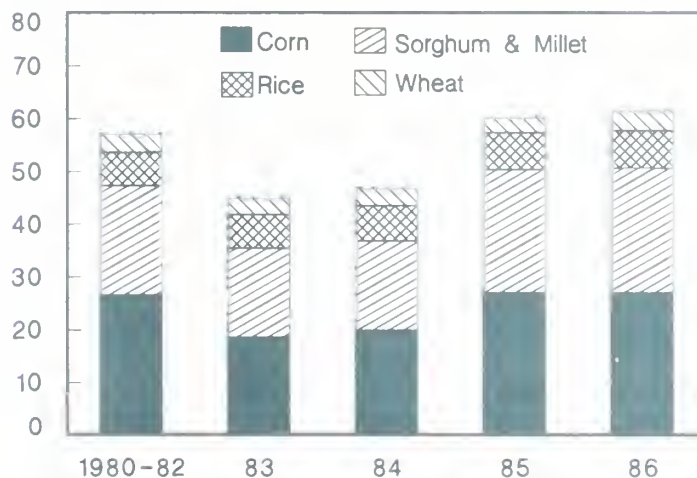
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Sub-Saharan African Grain Production

Million tons



# Sub-Saharan Africa



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## SUMMARY

The recovery in agricultural production for the second year provided a "breathing spell" for Sub-Saharan Africa, after the preoccupation with drought during 1982-84. In 1986, output increased by 4 percent over 1985. However, given the region's 3 percent annual population growth, even this recovery did not offset the per capita decline of the drought years. Food production has increased as rapidly as agricultural output, indicating that both food and cash crops benefited from good weather and producer incentives. Output of grains, which dominate agriculture in most Sub-Saharan countries, rose more than 30 percent over the past 2 years. The production rebound reflects favorable weather in a region vulnerable to the random volatility of weather. Coping with shortages in 1 year and surpluses the next plagues the region.

In the longrun, lack of modern technology and disincentive policies will remain as the main factors to overcome in achieving output growth. Demand for agricultural products will continue to grow rapidly, along with the region's population, indicating the importance of policy measures to reduce variability in food supply and support long-term sustainable production growth.

The International Monetary Fund and the World Bank have made policy reform a condition for future lending. By early 1987, 22 countries were undertaking "structural adjustment policies" (SAPs) designed to reduce government intervention and improve market efficiency by encouraging greater private participation in the market. Currency devaluation and reduced trade taxes were adopted to promote exports and improve the trade balance. Despite wide participation in structural adjustments, the trend toward policy reforms has met resistance. For example, in late 1986, Zambians rioted against increases in food prices resulting from that country's reform package.

Despite better weather and policy reforms, 1986 could be considered one of the worst for Sub-Saharan Africa in terms of external performance, a situation that

reflects, in part, declining commodity prices, growing financial constraints, stagnant demand, and protectionism by industrial countries. The region's export earnings fell by about 20 percent from 1985, a drop attributed to lower prices rather than volume. Even more important, earnings were just 55 percent of their 1980 peak. An \$85-billion debt has been rising relative to the size of the region's economies, and is currently about 50 percent of GDP.

Sub-Saharan Africa has traditionally exported beverage crops (coffee, cocoa, and tea) and cotton, sugar, and oilseed products. During 1986, the output of coffee, cocoa, and sugar rose, while that of cotton and tea fell. The outlook for cash crop production is for slower growth because of increased international competition and continued low prices.

In 1986, as a result of the poor financial situation, total imports declined for the fifth consecutive year to about \$40 billion. Imports had peaked near \$70 billion in 1981. In the late 1960's, food imports had accounted for about 10 percent of total imports. In 1983-85, they rose to more than 15 percent, a function of reduced agricultural output. Food imports are mainly grains--wheat, rice, corn, and sorghum. These grains account for about 60 percent of the diet. Grain imports peaked in 1984 at about 15 million tons. In 1986, they totaled 10 million tons, about the annual average since 1980.

The outlook for trade expansion is not promising. While there is a growing need for foreign exchange to support imports, capital flows have stagnated. The use of foreign credit to supplement domestic savings in financing imports has become common. Most external assistance has been provided through official organizations, and private loans have gone principally to West African oil exporters. As international capital flows have declined, debt service payments have increased. Currently, many countries are unable to service even highly concessional loans. In early 1987, the crisis was partially

alleviated by a 10-year debt service moratorium declared by the Paris Club of official lenders.

The lighter debt burden and improved policy environment are unlikely, however, to result in dramatic economic growth in Sub-Saharan Africa. The lack of foreign exchange and highly variable food production have meant increasing reliance on food aid,

which has composed a 40-percent share of food imports in the 1980's. In the long term, with careful planning, food aid could fill part of the foreign exchange gap and increase economic productivity. Otherwise, the combination of food aid's disincentive effect on domestic production and the tendency to shift consumption from local production to imported products could further exacerbate an already tenuous financial situation.

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## AGRICULTURAL PERFORMANCE

Sub-Saharan African countries have now entered the second year of recovery in agricultural production, although with some performance variations among countries. Not surprisingly, this has had some negative effects, such as problems in handling surpluses and declines in producer prices in countries with free market price policies. Generally, the gain in food output is attributed to weather because of the subsistence nature of agriculture here and the limited use of new technologies. Policy changes can be credited for some cash crop increases because the commercialized nature of the market makes it more responsive to price signals.

Many short-term recoveries have been recorded in the past with limited impact on long-term declining production trends. The region's growing population continues to put pressure on available food supplies, and lack of improved technologies, weather variations, and internal conflicts persist. This means that the historical decline in per capita production is likely to continue. The potential for increased productivity, however, does exist. Government commitments to policy adjustments, which increase producer incentives and investment to build market infrastructure required for the commercialization of agriculture, could substantially improve the long-term situation.

### Recent Production Developments

Between 1984 and 1986, Sub-Saharan Africa's growth in total agricultural output averaged 5 percent annually, well above the 2-percent long-term growth average. But with a 3-percent annual population growth rate, even the sharp recovery in aggregate

output has not offset the per capita declines of the drought years (1983 and 1984). Per capita agricultural output is still 7-8 percent below the level of the late 1970's and early 1980's. Food production has increased as rapidly as agricultural output, indicating that both food and cash crops benefited from good weather and producer incentives.

Although on average, the region's food and agricultural situation has greatly improved, conditions in individual countries vary widely, with performance shaped by two dominant factors—weather and policy. In 1985, the first year after the drought, recovery was widespread, with only Ghana and Liberia experiencing negative growth rates. In both countries, large 1984 harvests had lowered prices, and farmers responded by reducing plantings the next year. When comparing 1986 agricultural production with 1985, six countries show declines. Although some negative growth rates are to be expected after a record year such as 1985, in most countries where output fell in 1986, producer prices declined or stagnated following record harvests. This was the case in Zimbabwe, Sudan, Malawi, and Togo. In Senegal, weather accounted for the drop in grain production. In Mali, where meat is an important agricultural product, herd rebuilding reduced slaughterings.

### Grains

Grains dominate the agriculture of most Sub-Saharan countries, especially those areas most susceptible to drought, such as the Sahel. During the past 2 years, grain harvests improved dramatically, more than 30 percent over the drought years of 1983 and 1984. While total 1986 output (including South Africa's) was below 1981, the 1986 grain



harvest for the rest of Sub-Saharan Africa was a record (figure 1). Output of other food crops increased significantly, but not as sharply as grains. Good weather and policies aimed primarily at the grain sector were responsible for both increased area and higher yields (table 1).

After 2 years of production recovery, however, there is growing concern over the direction of pricing policies. Countries that adopted a free market system are faced with declining producer prices, which could mean significantly reduced output in 1987. In some countries with controlled prices, marketing agencies have failed to purchase surpluses because of financial difficulties. Again, this means lower producer prices and is expected to lead to reduced plantings. Although it is early in the 1987 season, the outlook is not as favorable as it was in 1985 and 1986. Grain production is forecast 10 percent lower than in 1986. With the drought in Southern Africa and the prospects for Sudan and the Sahel still unknown, actual production may be even lower than projected.

### Regional Performance

Grain production patterns vary by area, (figures 2 and 3). *West Africa* is the largest producer, with almost 21 million tons of grain in 1986, up 3 percent from 1985. Within the region, the type of grain produced depends on the amount of rainfall. Rice and corn are important along the coast, while millet and sorghum account for most of the grain in the Sahel. Nigeria, accounting for half of total output, is a major producer of all four grains. The Nigerian grain harvest increased 6 percent in 1986, the third consecutive good crop year. Not only was weather favorable, but import bans on corn and rice stimulated domestic production. Both Burkina and Niger harvested record grain crops because of good rainfall, but the improvement was less than the previous year. Senegal, Gambia, and Cote d'Ivoire (Ivory Coast) all had smaller grain harvests in 1986 than in 1985. Weather was blamed for these declines, but record crops in 1985 undoubtedly reduced prices in 1986.

Carryover stocks remain high in West Africa, except for Senegal and Nigeria. In Senegal, the 1986 millet and sorghum harvest was below average, and large stocks remaining from 1985 will probably be depleted before the

Figure 1  
Grain Production in Sub-Saharan Africa\*

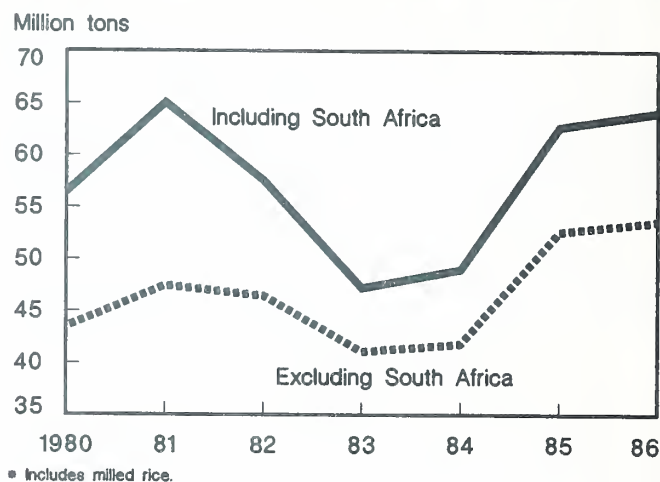


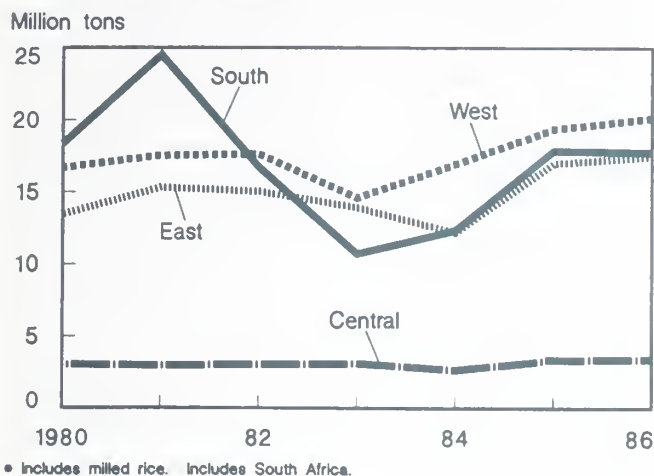
Table 1- Sub-Saharan Africa: Grain area, yield, and production

Commodity and year	Area	Yield	Production
	Million hectares	Kg/ha	Million tons
Sorghum and millet			
1980-82 avg.	31.9	648	20.7
1983	30.7	550	16.9
1984	31.2	541	16.9
1985	35.1	667	23.4
1986	33.6	702	23.6
Corn			
1980-82 avg.	18.3	1445	26.5
1983	18.0	1027	18.5
1984	18.7	1067	19.9
1985	19.1	1412	27.0
1986	19.2	1404	27.0
Rice, paddy			
1980-82 avg.	4.5	1425	6.3
1983	4.5	1429	6.4
1984	4.6	1446	6.7
1985	4.8	1424	6.9
1986	4.9	1436	7.1
Wheat			
1980-82 avg.	2.9	1229	3.6
1983	2.9	1100	3.2
1984	3.0	1147	3.4
1985	3.0	1019	3.0
1986	3.0	1298	3.9
Other 1/			
1980-82 avg.	2.4	1063	2.5
1983	2.4	933	2.2
1984	2.3	908	2.1
1985	2.4	993	2.4
1986	2.4	1073	2.5
Total			
1980-82 avg.	60.0	994	59.7
1983	58.5	807	47.2
1984	59.8	819	49.0
1985	64.4	973	62.7
1986	63.2	1015	64.1

1/ Includes barley and teff.



Figure 2  
Sub-Saharan Grain Production by Region\*

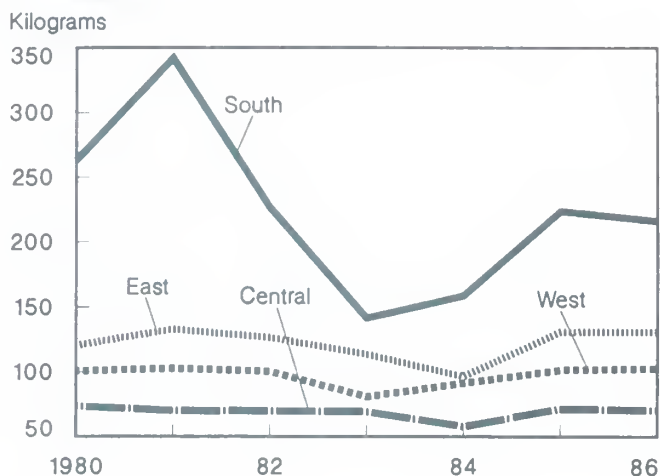


1987 harvest. Nigeria's low stock levels are a result of the country's ban on grain imports. In the past, traders held large stocks of imported grain. While wheat imports jumped at the end of 1986 in anticipation of the import ban, these stocks were expected to be exhausted by mid-1987. Some rice and wheat imports are continuing through unofficial channels, but at a level that would prevent any stock accumulation. Low prices for sorghum and millet in northern Nigeria indicate significant stocks of these grains.

In West Africa, early season rains (March-May) in 1987 were adequate for crop development along the coast, except in Nigeria where the rains were delayed. The rains begin in the Sahel in June, but crop prospects will not be known until September or October. However, with large stocks, both centralized and on-farm, and low prices throughout the 1986/87 season, farmers likely reduced 1987 plantings. This will have the greatest impact in the Sahel where governments have been unable to support producer prices.

*Southern African* grain output, heavily influenced by South Africa and Zimbabwe, declined slightly in 1986, following a 45-percent jump in 1985. The 12-percent drop in Zimbabwe was caused by a decline in area planted to corn. Following the drought years of 1983 and 1984, Zimbabwe's corn output increased dramatically with a bumper crop in 1985, a result of excellent weather and producer price increases. In 1986, production

Figure 3  
Per Capita Grain Production in Africa by Region



was significantly higher than historical levels, although less than 1985's level. With two consecutive large harvests, Zimbabwean policymakers are concerned with the costs of holding large stocks, presently estimated at 1.5 million tons. To encourage a shift to other crops, such as soybeans and sunflower seeds, the Government is increasing producer prices relative to the corn price, which did not increase in 1986 and 1987.

In South Africa, 1986 output rose by 3 percent largely because of a record wheat crop. In Zambia and Malawi, production responded to price signals. Output in Zambia rose because of higher producer prices leading to area expansion, while in Malawi lower prices led to a decline in production.

Production in the Southern region during 1987 will be affected by low rainfall earlier in the year that reduced harvests—especially of corn—in Zimbabwe, Zambia, and Mozambique. The impact will be severest in Mozambique, which has had several poor harvests in addition to guerrilla activity that has cut area planted and input availability. The drought also will further limit food supplies. Food aid will be essential during the coming year, and Mozambique's grain imports could exceed 500,000 tons.

Zambia could also face food shortages in 1987 because of the reduction in its most recent harvest. Stocks are low, and the country is facing a severe foreign exchange shortage that could result in demand for more

food aid. While Zimbabwe's corn production plummeted nearly 50 percent in 1987, stocks are sufficient to meet the country's corn needs. However, the drought will limit water available to irrigate wheat and could lead to increased wheat imports.

In *East Africa*, grain production rose a modest 4 percent, with gains in Kenya, Ethiopia, Tanzania, and Uganda offsetting declines in Somalia and Sudan. Better weather was responsible for increases in Ethiopia, while in Kenya and Uganda, good weather and higher producer prices led to area expansion. Sudan also had good weather, but lower prices reduced area planted. As prices for sorghum continued to fall throughout the season, farmers left some fields unharvested. After the 1986 harvest, Sudan had a stock carryover of nearly 2 million tons of sorghum. Although Sudan could export more than 500,000 tons of sorghum in 1987, substantial stocks would remain that could discourage farmers from increasing output in 1987. Sudan will continue to import wheat at levels slightly higher than last year because water is lacking for wheat irrigation.

In Ethiopia, rainfall this spring was above last year's level and also above normal. As a result, there will be a good harvest for the secondary season crop. Also, the rain will be beneficial in preparing the land for the main season crop in May–June. Therefore, the 1987 harvest could exceed the year-earlier level of 5.8 million tons.

Kenya's 1987 grain harvest is expected to fall from the 1986 record. The rainy season began satisfactorily, but producer incentives were reduced, given the high costs of handling the 1986 corn surplus. As producer prices are already above world market levels, they were not increased for corn or wheat in 1987. Fertilizer supplies and credit have been reduced, as recovery of 1986 loans has been low and farmers had been permitted to sell directly to processors. For 1987, farmers must again sell at fixed prices to the Grain Marketing Board whose financial instability may result in payment difficulties.

#### *Commodity Composition*

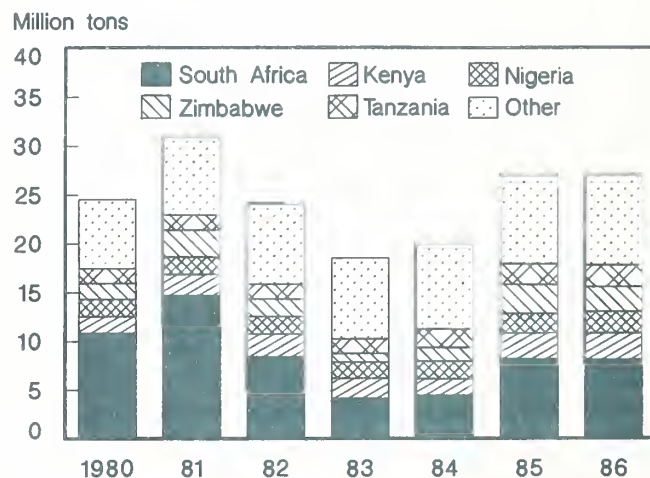
Among the grains, coarse grains (sorghum, millet, corn, and barley) account for more than 54 of the 64 million hectares planted to

grains and 80 percent of total output. Corn is the most widely grown, contributing about 45 percent of total output. Southern Africa produces more than half of Sub-Saharan Africa's corn. However, production in Southern Africa declined in 1986, with all major producers except Zambia harvesting smaller crops. Most of these declines resulted from unfavorable price movements. In Malawi and Zimbabwe, costs associated with large stocks forced Governments to hold down prices. In Zambia, good weather and producer incentives were responsible for the larger crop. Other major Sub-Saharan producers—Kenya, Tanzania, Nigeria, and Ethiopia—saw output rise in 1986, with good weather and producer incentives contributing to this increase, particularly in Kenya and Tanzania (figure 4).

West Africa is the major millet and sorghum region, accounting for 13 of the 24 million tons produced in Sub-Saharan Africa. Total output increased only 2 percent in 1986 following a 40-percent jump in 1985. Nigeria's 7.5 million tons make it the largest producer by far. The country's steady 4–5 percent growth in output during the past 3 years is a product of both good weather and high prices. Other important producers in the region are Sudan, Burkina, Niger, and Ethiopia. Harvests were larger in all these countries except Sudan, where prices reduced output despite good weather (figure 5). (See Sudan Box.)

Wheat and rice production is much less variable than for other grains not grown under

Figure 4  
**Corn Production**





irrigation. Wheat output recovered sharply in 1986 following a low 1985 harvest (figure 6). South Africa and Sudan both harvested good wheat crops in 1986, after lack of water reduced output the previous year. South Africa produces more than 50 percent of the wheat grown in Sub-Saharan Africa. Rice output, which has grown steadily at 3 percent per year, is concentrated in West Africa and Madagascar. In Nigeria, the largest West African producer, rice output has declined in recent years. Production has not varied much for the other major producers, Guinea, Liberia, Sierra Leone, and Cote d'Ivoire, but both Mali and Burkina increased rice production significantly after the drought.

Figure 5  
**Millet and Sorghum Production**

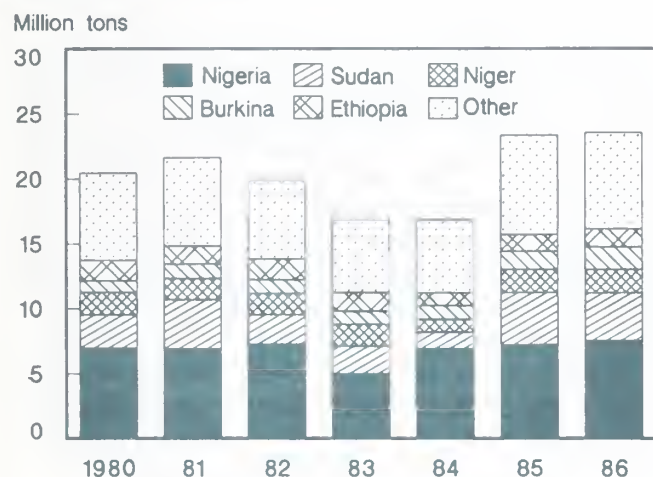
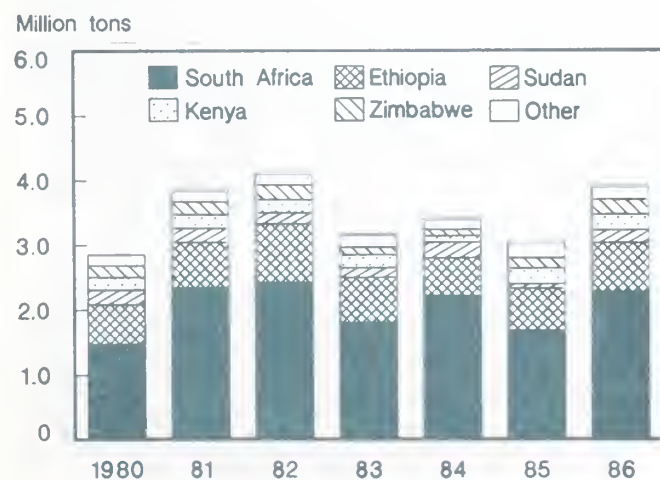


Figure 6  
**Wheat Production**



## Root Crops and Plantains

Production of root crops and plantains, important in African diets, has responded to the improved weather during the last 2 years (table 2). Production of these crops, which grow in higher rainfall areas, is not as variable as for grains. Output has increased in each of the last 3 years, led by Nigeria, the major producer. Nigeria's harvest was reduced both by drought and pests in 1983. Since then, rainfall increased, the pests were controlled, and the Nigerian Government restricted grain

Table 2- Sub-Saharan Africa: Root crop production, selected countries

Country and Commodity	1983	1984	1985	1986
1,000 tons				
Angola				
Potatoes	40	40	40	40
Cassava	1,925	1,900	1,925	1,950
Sweetpotatoes	180	180	185	185
Plantains	210	215	215	220
Cameroon				
Cassava	600	620	637	640
Sweetpotatoes and yams	375	375	411	415
Cocoyams	775	800	822	825
Plantains	1,979	2,300	2,510	2,525
Cote d'Ivoire				
Cassava	1,060	1,250	1,245	1,260
Sweetpotatoes	30	35	35	35
Yams	2,170	2,470	2,500	2,550
Cocoyams	225	260	300	300
Plantains	855	1,000	1,100	1,150
Ghana				
Cassava	1,729	4,083	2,373	3,040
Yams	866	880	850	900
Cocoyams	720	730	700	750
Plantains	342	650	676	740
Madagascar				
Potatoes	253	263	264	264
Cassava	1,992	2,047	2,142	2,190
Sweetpotatoes	463	463	450	467
Mozambique				
Potatoes	50	55	60	55
Cassava	2,300	2,600	2,800	2,900
Sweetpotatoes	40	45	50	45
Nigeria				
Cassava	9,950	11,800	12,600	13,700
Yams	16,625	18,500	18,300	18,500
Cocoyams	1,600	1,760	1,900	2,050
Plantains	1,270	1,420	1,550	1,700
Tanzania				
Potatoes	200	195	205	200
Cassava	5,400	5,600	5,500	5,500
Sweetpotatoes	530	500	530	530
Uganda				
Cassava	3,239	3,264	3,900	4,100
Sweetpotatoes	1,843	1,857	1,900	2,000
Zaire				
Cassava	13,450	12,925	13,600	14,200
Sweetpotatoes	310	310	320	325
Plantains	1,795	1,805	1,820	1,825
Total	75,391	83,197	84,415	88,076

imports causing some consumption to shift from grains to roots. Root crop production also increased substantially in Cote d'Ivoire and Ghana after the 1983 drought. However, growth has slowed during the last 2 years as adequate food supplies have reduced food prices.

### Export Crops

Sub-Saharan Africa has traditionally exported beverage crops (coffee, cocoa, and tea), cotton, sugar, and oilseeds and products. During 1986, production of coffee, cocoa, and sugar increased, while output of cotton and tea fell. The outlook is for slower growth in cash crop production because of increased competition and continued low prices (figure 7).

**Coffee:** World coffee output declined 15–20 percent in 1986, as the Brazilian crop fell 60–65 percent because of drought. In Africa, production recovered substantially since 1983 when sharp yield reductions—related to drought and tree pruning—in Cote d'Ivoire brought African output to its lowest level since the mid-1960's. This recovery raised Africa's share of world coffee production to 27–28 percent compared to the average of 23 percent during 1977–81.

Sharply higher prices caused the International Coffee Organization (ICO) to suspend export quotas in early 1986. The one-third fall in Brazilian exports presented an exceptional opportunity especially to

arabica producers in Africa. Among African producers, Kenya, Ethiopia, Rwanda, and Burundi export arabica, while robusta is exported mainly by Zaire, Uganda, Cameroon, and Cote d'Ivoire. The increased world price, at the time of recovery in Africa, meant higher export earnings for Kenya, Zaire, Burundi, and Rwanda. Good weather and policy incentives were the main factors behind increased output.

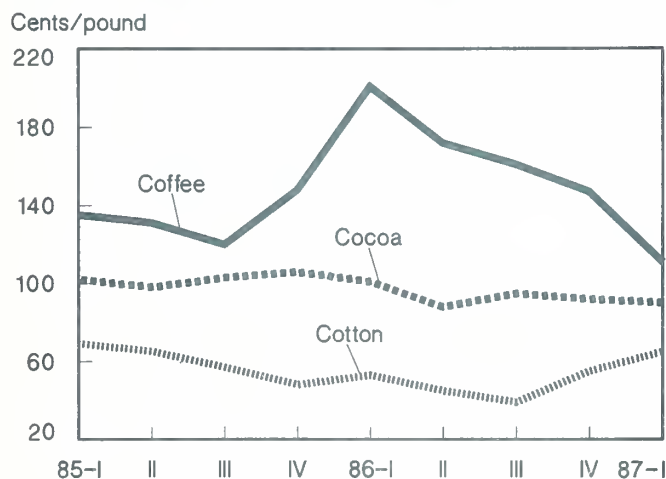
In Cote d'Ivoire, Uganda, and Cameroon exports did not increase significantly. Cote d'Ivoire's 1986/87 output declined 6 percent following a good harvest. Because of quality problems and long-term contracts, prices were relatively low. In Uganda, production and exports have remained almost unchanged because of transportation and financing problems.

The 1987/88 production outlook for African countries is mixed for the short term and highly dependent on weather. Over the longer term, most countries plan to increase output. The outlook for export prices is uncertain as no agreement has been reached on export quota allocations as of mid-1987. Prices may remain pressured by the large upcoming Brazilian crop. Many African countries are demanding increased quotas, but Brazil has not been willing to reduce its quota, which would make that possible.

**Cocoa:** World cocoa output rose to nearly 2 million tons in 1986/87, the third consecutive year of world surplus output. Carryover stocks as of September 1987 are forecast at 700,000 tons. Prices generally have been soft during the first half of 1987, reflecting ample supplies. A new International Cocoa Agreement (ICCA) between producers and consumers was negotiated last July, but buffer stock purchases did not begin until May 1987. During the first few weeks, purchases by the buffer stock manager were too small to support the cocoa price. Although producers are considering steps to limit sales, prices are not likely to recover while large stocks are overhanging the market.

Among the four main producers in the region—Cote d'Ivoire, Ghana, Nigeria, and Cameroon—Cote d'Ivoire saw a moderate increase of 2 percent above last year's record 580,000 tons. For 1986/87, the producer price remained at 400 CFA/kg in response to the

Figure 7  
**World Prices for Exported Commodities**





declining world market price. The Ivorian Stabilization Fund for coffee and cocoa is expected to lose money in 1987 for the first time in many years.

Ghana's 1986/87 cocoa harvest is estimated at 225,000 tons. Output increased in each of the last 4 years, reversing more than a decade of decline. However, Ghana is unlikely to be able to sustain these production increases unless a large replanting program is undertaken. More than half of Ghana's cocoa trees are beyond their normal 30-year life span. In addition, producer prices for cocoa have been increased significantly in recent years, but the full benefit from devaluation was not passed on to producers. Moreover, Ghanaian farmers receive only about 35 percent of world cocoa prices, while neighboring Ivorians receive 55 percent. Smuggling of cocoa out of Ghana remains a problem.

In Nigeria, cocoa output declined to 125,000 tons, continuing a 10-year trend mainly attributed to low producer prices. Abolition of the marketing board reduced purchases this year, but should improve output in the long run. Private traders now purchasing cocoa are offering much higher prices, which should stimulate production. Cameroon's cocoa crop is up slightly in 1986/87. Production has stagnated because many trees are past their peak productivity. New plantings should increase production in the early 1990's.

*Tea:* World tea output declined slightly to 2.2 million tons in 1986. African output was down 2.4 percent to 262,800 tons. In recent years, Africa has accounted for about 12 percent of world production and one-fifth of world exports, with Kenya the major exporter. World tea prices weakened in 1986, as London auction prices dropped about 3 percent to \$0.875 a pound. In early 1987, tea prices weakened further, as stocks rose and competition intensified.

The major tea producers in the region are Kenya, Malawi, and Tanzania. In Kenya, the 1986 output declined slightly after the record crop in 1985 because dry and cool weather reduced production. Kenya's tea auction prices averaged \$0.74 a pound. Both plantings and yields are rising in Kenya, as

smallholders—who now account for nearly 50 percent of output—use more fertilizer.

In 1986, Malawi's tea output fell slightly in 1986, as did production in Tanzania. To aid export competitiveness, Malawi devalued its currency in 1986 and again in early 1987. In Tanzania, new policy measures allow private exporters to keep 10 to 15 percent of their export earnings for imports of their choice. However, the Bank of Tanzania still has final control over foreign exchange use, and there have been no investments in the infrastructure of the tea industry.

*Cotton:* World cotton output is estimated 12 percent lower than in 1985/86, largely because of weather and lower world prices, which led to reduced plantings. U.S. output is down 28 percent from 1985/86, because of sharply lower prices and weather problems. Output of Sub-Saharan Africa's leading producer, Sudan, is estimated up 6 percent to 158,000 tons. In response to higher world prices, the Sudanese Government—which decides on area allocation in the irrigated sector—increased area planted to extra long staple (ELS), while reducing area allocated for medium staple (MS) cotton. Of the cotton area, 73 percent was planted with ELS cotton in 1986/87, compared to 53 percent in 1985/86. Sudan continues to emphasize ELS production in response to world market conditions. The extent to which producers can absorb full input costs, given world cotton prices, will determine Sudan's share of the world ELS market. Sudan's primary competitor in ELS cotton is Egypt.

Ivorian cotton output increased slightly to 91,000 tons in 1986/87 because of area expansion, despite constant producer prices since October 1984. Among the other producers in West Africa, output showed little change in 1986/87, except for Chad where cotton production dropped by 16 percent. Weather was favorable throughout the region in 1986, but extremely low world prices caused marketing agencies to lose money. Producer prices were not increased for 1986/87 crops, and in some cases input subsidies were reduced.

In Zimbabwe, the 1986 cotton crop rose 11 percent despite dry weather and in part because of a proposal to raise wages for cotton workers. Zimbabwe's quality,

hand-picked, smallholder cotton finds a ready export market, with 70 percent exported. Prices of higher grades were raised while others remained at previous levels. The price for domestically marketed cotton has been held at the 1984 level despite a 25-percent currency devaluation in the last 3 years. Plantings for 1987 were up by 26 percent, as labor problems were resolved and producer prices were increased 7 percent. The current drought is likely to reduce yields and lower output to only 10 percent above the 1986 crop.

**Oilseeds:** World oilseed output for 1986/87 is forecast at a record approaching 200 million tons. This excludes palm oil estimated at 7.9 million tons. The upward trend in oilseed output led to world price declines for all vegetable oils in 1986. The palm oil price suffered a 50-percent decline, with soybean oil and peanut oil down 40 and 37 percent, respectively. In the first half of 1987, only the price of palm oil rose as Malaysian production declined, and palm oil is now selling at a premium over soybean oil for the first time since 1984 (figure 8).

In the past, Sub-Saharan countries were net exporters of oilseeds and palm oil. Recently, these countries have crushed most of their oilseeds, exporting vegetable oil and meals. Although the continent still exports oilseeds, especially peanuts and palm kernels, it is a net importer of vegetable oil, mostly palm oil. Most African countries do not import oilseeds for crushing despite excess capacity, especially in Nigeria and Senegal,

because there is little demand for oilmeals for feed use.

Peanut output in Sub-Saharan Africa in 1986 increased more than 20 percent, led by a sharp recovery in the Senegalese crop. After several years of poor harvests, a result of drought and low producer prices, Senegal's output recovered to 840,000 tons, more than 40 percent above the 1985 crop. Even though rainfall was below normal in July and August, farmers responded to higher prices by expanding area.

Three other major peanut producers, Nigeria, Zaire, and Sudan, have shown little output growth in recent years. Nigeria's 1986 crop was up slightly to 450,000 tons, but little entered commercial channels. Currently, Nigerian oil mills are operating at only a fraction of their capacity, while vegetable oil is imported despite an announced ban.

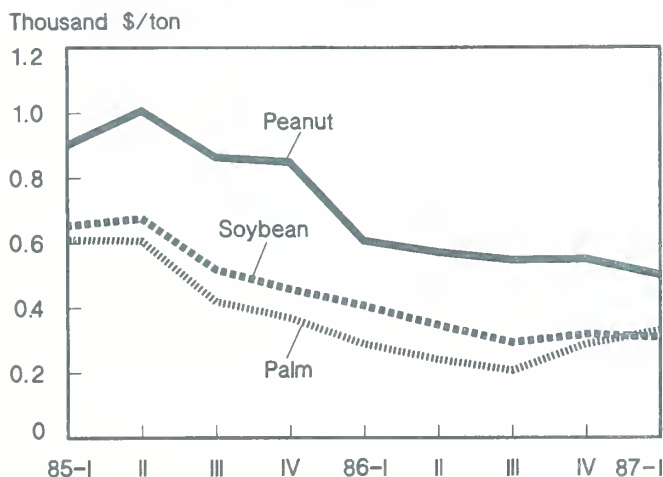
Given current price trends, Sub-Saharan countries could benefit by switching from palm oil to soybean oil imports. The peanut oil exporters, such as Senegal and Gambia, will again experience lower foreign exchange earnings unless the quantity of peanut oil exports rises significantly.

**Sugar:** World sugar output rose 2.3 percent in 1986 to 101.7 million tons. Sub-Saharan output—all cane—rose slightly to a near-record 6.6 million tons, a result of good weather. The region remains a surplus producer, with consumption estimated at 4.9 million tons.

In 1986, the trend of lower world prices finally reversed, increasing 49 percent over 1985, to an average of \$0.06 per pound. EC and U.S. import prices were much higher at \$0.19 and \$0.21, respectively. African exporters are concerned over EC and U.S. protectionist pricing policies as their consumption has been stagnant or dropping in recent years. In addition, EC stocks have grown.

With the exception of South Africa, whose output dropped about 6 percent to 2.1 million tons, Mauritius, Zimbabwe, and Swaziland had very high production growth, in the range of 8 percent (Zimbabwe) to 32 percent (Swaziland). Growing conditions were good, and in Zimbabwe more efficient irrigation

Figure 8  
**World Vegetable Oil Prices**





technology resulted in the yield exceeding 15 tons per hectare. Producer incentives have also played a significant role in increasing output. In Zimbabwe, where the Government sets sugar prices, producer prices were increased by 15 percent in 1987 to the equivalent of \$0.17 a pound. In Mauritius, the export duty on sugar was reduced in 1985 from 23.5 percent to about 19 percent to encourage investment in the sugar sector. In 1986, the World Bank loaned Mauritius \$30 million to help raise productivity in the industry.

Sugar production in 1986 increased in Sudan and Kenya, major importing countries. But costly investment by both countries has not been well-managed and coordinated, such that in Kenya some factories are operating at less than 50 percent of capacity, and the Kenana factory in Sudan operates at less than full capacity even in a good production year. To encourage output to meet rising consumption, Kenya raised cane prices by 11 percent in 1986 (\$18.50 a ton). While area seems to be responding positively, growing 23 percent since 1980, yields and extraction rates have trended downwards.

In 1987, South Africa expects some increase in sugar yields, although area will drop again. Consumption is expected to increase 40 percent in Swaziland as new soft/fruit drink plants open, and industrial use will increase in Zimbabwe. South Africa, Swaziland, and Zimbabwe have plans to increase ethanol production for mixing with gasoline. Cuts in U.S. quotas for 1987 and U.S. and Canadian trade sanctions against South Africa's agricultural exports will mean reduced sugar imports from Africa in 1987.

### *Livestock*

The prolonged drought had a severe impact on livestock in many African countries. Animals died or were slaughtered because of lack of pasture and water. After normal rains returned in 1985, herd rebuilding began, a process that could take from 5 to 10 years depending on the extent of the losses. Meanwhile, meat supplies will be tight and prices high (see Sudan box).

West African countries are in the herd-rebuilding phase of the livestock cycle following 2-4 years of high slaughtering due to

drought. While data on the livestock sector remain subject to wide margins of error, certain trends can be documented. The Food and Agricultural Organization of the United Nations (FAO) estimates cattle trade among West African countries at about 1 million head, with Mali, Niger, and Chad the largest exporters and Nigeria and Cote d'Ivoire the largest importers. During the past 2 years, trade declined dramatically because of the drought and herd rebuilding. Declining incomes also dampened demand in Nigeria.

The situation in Mali, West Africa's largest livestock exporter, is typical. The cattle herd was estimated to have declined 35 percent between the end of 1982 and 1985. Drought impeded natural herd reconstitution, and farmers attempted to prevent further animal losses by raising the offtake rate to about 16 percent in 1984 compared to 8 percent during nondrought years. Since mid-1985, the return of more favorable weather has improved pasture conditions. The reconstitution of the herd resumed, with the offtake rate declining to 12 percent in 1986, leading to a sharp decline in exports and domestic consumption. The unit value of Mali's livestock exports was estimated to have risen about 80 percent from 1984 to 1986.

Most livestock in West Africa is produced by traditional herders. Cote d'Ivoire and Nigeria, however, are encouraging modern livestock operations, especially for poultry. Poultry was a focal point for Nigerian investors in 1986, even as some small producers failed because of high costs and declining demand. The industry in Nigeria is attempting to reduce costs by adopting modern feed use techniques. Feed mills have had to rely on domestic supplies since imports of most feeds, especially corn, were prohibited in 1985.

Meat output increased to an estimated 58,000 tons in Cote d'Ivoire in 1986. Substantial increases were recorded for poultry as a result of chicken import restrictions. While beef production increased because of Government projects, prospects are constrained by the high cost of local production and competition from low-priced imports.

Botswana has faced drought over the past 5 years, and the size of the national livestock

herd continues to decline. The animal mortality rate rose from 20 percent in 1985 to 28 percent in 1986 which, combined with lower birth rates and higher slaughter rates, reduced the herd from 2.5 million to 2.3 million animals. As a result, the beef industry, one of Botswana's major export revenue sources, saw commercial beef production dropped to 194,000 tons. However, revenues increased somewhat because of the depreciation of Botswana's currency against European currencies.

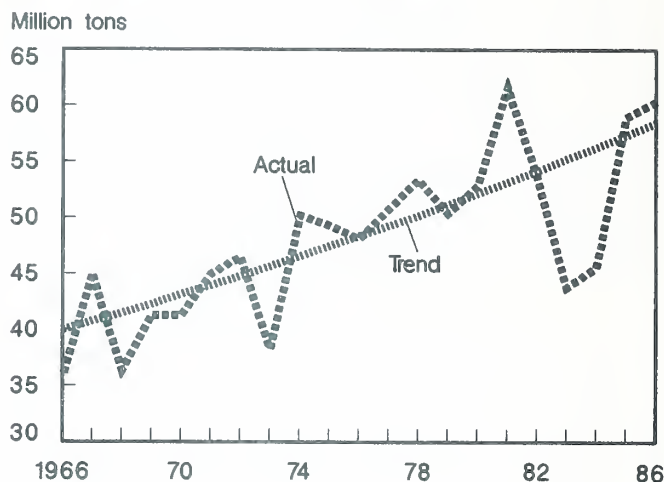
As a result of low producer prices, escalating production costs, and the aftereffects of the 1982–84 drought, beef supplies are still depressed in Zimbabwe. Recorded slaughter for 1986 was estimated 20 percent lower than 1985's already depressed levels. Many producers have been diverting cattle to the semi-legal free market, and this has reduced purchases by the Cold Storage Commission. Shortages have necessitated a suspension of beef exports to the EC under Zimbabwe's quota agreement.

In Tanzania, which has the third largest cattle population in Africa, livestock output has not done well because of the effects of drought, disease, and poor nutrition. The Ministry of Agriculture, concerned about declining livestock numbers, has called on producers to use more modern animal husbandry practices to curtail the problem of low herd growth rates, diseases, and poor feeding practices. Transport of animals from production to consumption areas is also plagued by inaccurate system controls, lack of coordination, overall management problems, and decentralized marketing of livestock products.

### Long-Term Production Potential

Producing adequate food in Sub-Saharan Africa became an increasingly severe problem in the past decade. Declining average per capita food production and high year-to-year variability characterize the region, implying chronic food shortages, increased food imports, and serious dietary problems, regardless of the variations in food production performance among these countries (figure 9) (1).

Figure 9  
Total Grain Production for Region



During the 1966–86 period, cereal production grew at less than population growth in 28 countries, or at less than 3 percent. In eight countries, production showed a declining trend, while in 10 countries production growth was more than 3 percent. Although food production includes cereals and noncereal staples, it is the variability in cereal output that explains most of the fluctuation in total food production. The recurrence of drought in Southern Africa early in 1987 demonstrates that the severe food shortages of 1982–84 could recur at any time.

### Growth in Cereal Production 1966–86

% annual growth	Countries
Negative	Gambia, Mali, Mauritania, Angola, Botswana, Chad, Mozambique, Lesotho
Less than 1	Guinea-Bissau, Sierra Leone, Malawi, South Africa, Burundi, Madagascar, Zambia
1–2	Ghana, Guinea, Niger, Senegal, Togo, Ethiopia, Kenya, Uganda, Cameroon, Central African Republic
2–3	Burkina-Faso, Nigeria, Rwanda
More than 3	Benin, Ivory Coast, Liberia, Swaziland, Zimbabwe, Somalia, Sudan, Tanzania, Zaire, Congo

Population growth and past production performance leave little basis for optimism that per capita production of basic staples will improve. Food production forecasts—assuming current production trends and normal



weather—show increasing import dependency, to about 40 million tons by the year 2000, a fourfold increase from the 1980–85 average. Whether countries will be able to earn sufficient foreign exchange to import such large quantities of food, and whether they will have the physical capacity for handling and distributing such large amounts are unanswered questions. If the average variability in food production is taken into account along with historical food production growth rates, the picture becomes even gloomier. In countries such as Gambia, Sudan, Lesotho, Mozambique, South Africa, Senegal, and Zimbabwe, average production variation from trend was more than 20 percent, which means in a given year production is expected to fluctuate by more than 20 percent from the trend path.

With the exception of Sudan and Zimbabwe—where recent production increases have been attributed to structural factors, such as increased investment in land clearing and input availability—production growth in these countries has been less than 2 percent per year. This portends a growing risk of severe food shortages if imports are not increased to meet production shortfalls.

In most African countries, consumption fluctuations closely follow production variations because of the subsistence nature of the food-crop economy and limited storage facilities. This means that high production variations will cause deterioration in consumption (given that the region's nutritional level is lower than the standard requirement). Only Cote d'Ivoire had high production growth, 4 percent per year, and the average annual variation was less than 10 percent. In Cote d'Ivoire, increases in consumption attributed to income and population growth have outstripped production growth.

#### *Forces That Could Change Historical Trend*

Without substantial gains in productivity through improved practices and increased investments, the output of basic foods in the region is not expected to change significantly from past trends. Growth will be expansive rather than intensive, as it has been historically.

The outlook for cash crops differs from that for food crops. Many export crops have a comparative advantage, with a history of research dating to colonial times. Export crops are commercialized and more responsive to market signals, while most food is produced by subsistence farmers with limited market interactions. Although exports were hampered by unfavorable policies (low prices, overvalued exchange rates, etc.), they could revitalize much easier in response to policy changes than the food sector, as seen in Ghana and Sudan. Problems facing cash and food crops are interrelated as both compete for limited inputs, such as seasonal labor and land and investment funds.

*Problems:* The major problems that could affect longrun production potential are population pressure, weather, and civil strife.

*Population pressure* is one of the leading factors affecting growth of the region's economy and increasing demand for food. Sub-Saharan Africa has the fastest population growth and the highest fertility rate in the world. This has led to a higher population density in rural areas and more rural-urban migration, both of which affect productivity. At current growth ratios, Sub-Saharan Africa's population will double every 20 years. Yet with slow or no economic growth, the region will face a continuous struggle to provide basic necessities, and improvement in the standard of living will remain illusive.

*Weather:* The region's largely semiarid climate causes special problems for agriculture. The cropping season is short, and soil moisture tends to evaporate. Rain varies greatly and limits the choice of crops and crop varieties. Frequent droughts, averaging one every 3 years, affect food production in the short term, and plantation crops and livestock in the medium term. For example, 5 to 10 years of plentiful rainfall are essential to rebuild a cattle herd. High production variability strains these countries' administrative and physical capacity to handle shortages in 1 year and surpluses the next, and their financial ability to maintain producer incentives against fluctuating free market prices.

*Internal problems:* Internal conflicts and border disputes could harm agricultural performance. Such was the case with the civil wars in Sudan, Mozambique, Uganda, Ethiopia, and Angola. Short-term crop losses due to disease or pests also intensify production variations and have long-term negative effects on food production.

*Potential:* While Sub-Saharan Africa has the land resources to raise production, a combination of factors such as technology, infrastructure, and price incentives could affect longrun production potential.

*Land:* In a study, "Agriculture Toward 2000," the FAO compared potential supply capacity—determined by soil-climate conditions and farm technologies—to actual and projected population (2). The calculation for Africa indicates that even at subsistence farming levels—with no new technology—there is enough land available for food self-sufficiency for a population 2.7 times larger than the population in 1975. At an annual growth rate of 3 percent, this level would be reached by 2010. At the country level, the picture darkens. Of 38 Sub-Saharan countries, 13 do not have enough land—given subsistence farming

## SUDAN'S AGRICULTURAL RECOVERY CONTINUES

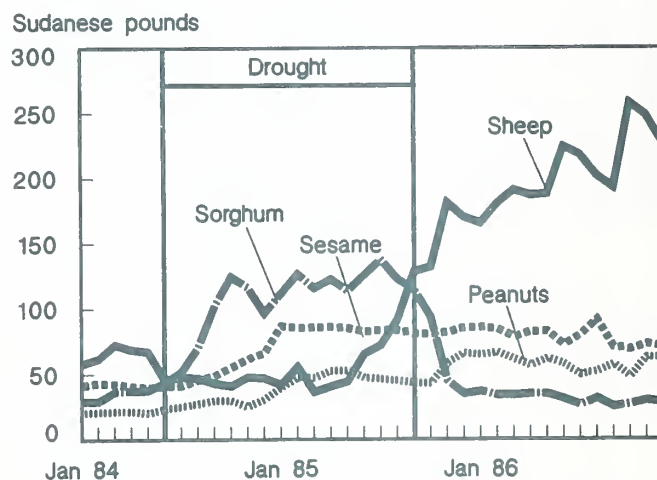
In 1986, Sudan had another bumper crop of sorghum at 3.4 million tons, the second highest recorded. Oilseed output also improved, with peanuts increasing by more than 45 percent and sesame output nearly doubling over 1985. Cotton production has been at near-record levels for the last 5 years, mainly because of a new variety and improved cultivation practices. Livestock herds are still rebuilding.

The dramatic sorghum production increase over the last 2 years resulted not only from improved weather but also from increased area, a response to drought-induced higher prices. The variability of price movements for sorghum, peanuts, sesame, and sheep for the El Obeid market in Western Sudan is shown in figure 10, which illustrates the dramatic increase in sorghum prices after June 1984, with the realization of a crop failure. The high prices continue thru July 1985, when improved weather caused a crop recovery and commensurate sorghum price decline, which continued through 1986, as a second bumper was developing. In early 1987, sorghum prices fell below predrought levels.

Prices for peanuts and sesame show a similar trend, except that the drought-level prices continued until mid-1986. As improved output of these crops became apparent in 1986, their prices began to decline.

Livestock prices show a different trend. During the drought, sheep prices declined as

Figure 10  
El Obeid Market Prices



distress sales occurred. As the drought ended, prices reached record levels, as herd rebuilding began and sales declined substantially. As herds are rebuilt, animal prices are expected to decline. The increased demand for oilseeds for livestock feed in Western Sudan may have caused higher oilseed prices in 1985.

### Price Movements

The variability of grain, oilseed, and livestock prices shows the implication of market-determined prices for agricultural products in Africa. When sorghum prices reached record levels in 1985, food in Western Sudan came primarily through food aid, as



practices—to sustain their 1975 population levels. These are Botswana, Rwanda, Burundi, Ethiopia, Kenya, Lesotho, Malawi, Mauritania, Niger, Nigeria, Senegal, Somalia, and Uganda. All, with the exception of Somalia, Rwanda, and Nigeria, showed less than 2 percent production growth in the last 2 decades.

These countries account for one-third of the region's land and half its population. According to the FAO, 11 countries, mostly in central Africa, have extensive underused land. These are Congo, Central African Republic, Zaire, Angola,

Cameroon, Cote d'Ivoire, Liberia, Madagascar, Zambia, Equatorial Guinea, and Gabon, which occupy 30 percent of the region's land and account for 20 percent of its population. According to the International Food Policy Research Institute (IFPRI) in "Closing the Cereals Gap with Trade and Food Aid," major area expansion could occur in Sudan, with crop area increasing to 20 million hectares by the year 2000, a growth of about 7 percent a year (3). Countries such as Angola, Cote d'Ivoire, and Zaire are rich in natural resources but need extra skill and heavy investment to improve their market infrastructure. Among these,

sorghum became a luxury good. Currently, with sorghum prices at their lowest level in nearly 3 years, farmers in the mechanized areas are not harvesting their grain, as the cost is greater than the market returns. In 1986, the Agricultural Bank of Sudan (ABS) established a sorghum floor price, which at LS 36 per sack, is higher than the market price. But the ABS cannot enforce this price since it does not have the funds to purchase large amounts of sorghum and is still holding nearly 500,000 tons from last year's bumper crop. This situation could discourage sorghum producers for the next season.

The Sudanese Government has lifted the ban on sorghum exports, and exports of Government-held stocks are a priority. However, the exchange rate at which these stocks are exported is still overvalued, and private traders are unable to export at such high rates. Exports of sesame and peanuts face similar problems. Given that free market prices exist for most agricultural commodities in Sudan, a realistic exchange rate would provide adequate incentives for both producers and exporters of grains, oilseeds, and livestock. Hence, prospects for increasing export revenues are linked not only to conditions such as weather and input availability but also to the exchange rate.

### *Policy and Infrastructure Changes*

Sudan will have to make policy, infrastructure, and institutional changes over

the next few years to achieve its agricultural goals. For example, in the irrigated subsector where area allocations are administratively determined, the move to reduce Medium Staple (MS) cotton area to the new Extra Long Staple (ELS) variety called Shambat will continue. This could also lead to an overall reduction in cotton area, as the Government determines optimal cropping patterns for the irrigated subsector in response to world economic conditions. As hybrid sorghum—with improved yields—becomes integrated into the cropping pattern of the irrigated subsector, it should free up land for other crops. Therefore, a shift in cropping patterns could make room for alternative crops in the irrigated subsector such as sunflower, soybean, or forage crops.

A new all-weather road is being constructed in Western Sudan, which will integrate the major grain and oilseed production areas with urban and export markets. This could reduce transportation costs and improve incentives for producers in Western Sudan to increase production of agricultural commodities from that region.

While there have been 2 years of bumper crops in northern Sudan, the situation in the South is different. Continuing civil strife has disrupted local populations and led to food shortages. Food aid from northern Sudan is now being sent by air to parts of southern Sudan. This situation is expected to continue unless hostilities cease. [Brian D'Silva]

Angola had the lowest production performance in the last 2 decades, primarily due to civil war.

*Technology:* Throughout Africa, capital inputs are seldom used in food production. Fertilizer and tractor use is the lowest in the world and, for the most part, uneconomical. Crop varieties are mostly traditional and, although adapted to the harsh climate, their yields are low even in favorable growing conditions. Consequently, any improvement in technology would have a substantial impact on productivity. For example, in some areas of Zimbabwe, Zambia, and Kenya use of hybrid corn has increased yields more than four times the region's average to 5–7 tons per hectare. However, such measures might not be sufficient in all countries. According to the FAO, seven Sub-Saharan countries, Burundi, Kenya, Lesotho, Mauritania, Niger, Rwanda, and Somalia, cannot achieve food self-sufficiency by the turn of the century because of shortages of arable land, even if their technologies were to match those now used on commercial farms in Asia and Latin America.

*Policy:* Government policies could improve output performance by, for example, maintaining a system of adequate producer price incentives. Available research indicates that for both individual crops and aggregate production, supply response is positive (4) (5). This supports the premise that turning terms of trade in favor of producers would lead to growth in agricultural output. A realistic pricing policy, however, is only one element essential in a comprehensive government package designed to raise productivity. Further government action must include an array of policies and investments to ensure agriculture's growth. [M. Missiaen, S. Shapouri, and L. Witucki]

## POLICY DEVELOPMENT

The crisis in African agriculture peaked in notoriety during the famines of 1983–85, resulting in international review of

agricultural policy and renewed domestic willingness to implement changes. As the crisis deepened in 1983, two reform programs, one from the World Bank and one from the Organization for African Unity (OAU), dominated the policy discussion. The ensuing debate hastened the adoption of policy changes along World Bank lines throughout much of Sub-Saharan Africa (table 3).

The World Bank's 1981 agenda for "Accelerated Development in Sub-Saharan Africa" called for a shift in development focus from building infrastructure and developing human resources to raising production (6). It recommended reduced barriers on international trade, open market valuation of currency, privatization of some parastatals, and more open domestic marketing systems.

The OAU's 1980 "Lagos Plan of Action" targets self-sufficiency in foodstuffs using trade barriers and improved production technology (7). It relies on technology transfer and development like that of the "green revolution" in Latin America and India.

There was little controversy over the dimensions of the crisis. Per capita food production declined sharply as the drought spread across the Sahel and in Southern Africa. The magnitude of food shortages was probably unprecedented in African history, with more than 30 million people affected by March 1985. Famine, meaning dramatically higher death rates than normal due to food shortage, occurred in Ethiopia, Mozambique, and Sudan where relief efforts were hampered by civil wars. Foreign debt obligations exceeded the repayment capacity of numerous nations in the region. Since these countries were unable to place their public debt in the private capital markets, conceding to the International Monetary Fund (IMF) as the main source of balance of payments support became the only option. This dependency was reinforced because of the World Bank's willingness to undertake structural adjustment programs along the lines of IMF policies, so that these two institutions would not be viewed as competitors.

## Structural Adjustment

The food crisis was attributed to a wide range of constraints that extended beyond the



Table 3- Policy liberalization in Sub-Saharan Africa

Country 1/	Food shortage 1983-85	Constrained by civil war	Structural reform underway	Devalued currency 1985-87	Privatizing parastatals	Expanding foreign investment
Angola	X	X				
Benin					X	X
Botswana	X					
Burkina	X					
Burundi	X		X			
Cameroon						
Cent. African Rep.			X			
Chad	X	X	X			
Congo					X	
Ivory Coast						
Djibouti						
Eq. Guinea			X	X		
Ethiopia	X	X				
Gabon						
Gambia			X			
Ghana			X	X	X	X
Guinea			X		X	X
Guinea-Bissau			X	X	X	
Kenya	X		X			
Lesotho	X					
Liberia						
Madagascar			X			
Malawi			X		X	
Mali			X			
Mozambique	X	X				
Namibia		X				
Niger	X	X			X	
Nigeria				X	X	X
Rwanda	X	X				
Senegal	X	X				
Sierra Leone			X	X	X	X
Somalia			X	X	X	X
South Africa	X	X				
Sudan	X	X		X		
Swaziland						X
Tanzania	X		X		X	X
Togo			X		X	
Uganda		X				
Zaire						
Zambia	X		X	X	X	X
Zimbabwe	X					

1/ Sub-Saharan Africa also includes the island nations of Comoros, Mauritius, Sao Tome and Principe, and Seychelles.

low level of agricultural technology blamed earlier. Western Governments and international organizations tended to regard local mismanagement and low production incentives as the underlying causes. African Governments tended to identify declining terms of trade and natural factors, such as weather, as causes of continuing poor agricultural performance. Neither group claimed to have a path out of the morass of war or corruption, which constrained implementation of agricultural policies where most needed. By July 1985, however, the OAU acknowledged "the primacy accorded the state has hindered rather than furthered economic development." The OAU did not retract its

earlier prescription for agricultural reform but called for a doubling of agricultural budgets to support small producers, a call which the United Nations endorsed at its special session on Africa in May 1986. African policymakers, however, generally endorsed the World Bank approach, tending to raise prices, reduce government participation in production, and liberalize trade.

By early 1987, 22 of the 45 Sub-Saharan countries were undertaking structural adjustment through the World Bank or the IMF. The IMF has led the international pressure to amend African policies with conditional lending, but World Bank and

bilateral lending institutions have also tacked on more conditions, most of which are directed toward decreased state control of exchange rates and agricultural marketing.

Despite wide participation in structural adjustment, the trend toward conditionality continues to meet resistance. Opponents object to the reduced standard of living and the loss of sovereignty that comes with conditionality. In 1985 and early 1986, a national debate in Nigeria ended in the rejection of any agreement with the IMF. Although most of the IMF's recommendations for Nigerian policy were eventually adopted, the principle of conditionality was never accepted, and no loan was taken with the IMF. In October 1986, Zaire dramatically retracted its 4-year-old policy of following IMF conditions. In April 1987, Zaire reached a new agreement with the IMF that rejected such major components of the October announcement as ending the floating exchange rate. In January 1987, Sierra Leone failed to meet World Bank conditions, delaying the release of \$10 million in credit for an agricultural project. This was the sixth suspension of credits in Sierra Leone during the past year.

### *Marketing and Trade Policies*

A typical measure to restructure African economies is to relax state control over foreign exchange. Since 1983, major currency devaluations have occurred in Equatorial Guinea, Ghana, Guinea-Bissau, Nigeria, Madagascar, Somalia, Sudan, Tanzania, Zaire, and Zambia. Many countries, including most of those in this group, retain various controls on use of foreign exchange. Nigeria, for example, instituted a foreign exchange market in October 1986, but it continues to determine the value of foreign exchange for debt repayment and fertilizer imports. Similarly, Zambia reinstituted a two-tiered system for valuing foreign exchange in March 1987 under which debt payments and Government purchases of medical and educational supplies take place at administered exchange rates, while other actions operate through a periodic, foreign exchange auction.

Sale or termination of parastatals is a central policy within restructuring. Parastatals had long been criticized by the

World Bank and the IMF for their inefficiency. Nigeria abolished all six commodity boards in 1986. Except for cotton and cocoa, only a small amount of commodities had been sold to the boards in recent years because the boards offered prices substantially below open-market alternatives. The cotton board was active because it controlled inputs to the mills, while the cocoa board was active because it controlled exports. Several other types of state agricultural participation are being privatized in Nigeria. All state farms and various state processing facilities, including dairies, abattoirs, breweries, and distilleries, are designated for sale.

At least eight countries have ended state monopolies for marketing of particular agricultural goods since 1985 (Congo, Guinea Bissau, Malawi, Niger, Nigeria, Sierra Leone, Somalia, and Zambia). At least six countries have undertaken programs to privatize state involvement in agriculture during the same period (Benin, Ghana, Guinea-Bissau, Nigeria, Sierra Leone, and Togo). These countries, along with those cited by the World Bank in 1981 as already privatizing (Mozambique, Senegal, Uganda, and Zaire), account for more than half the population of Sub-Saharan Africa.

Freer international trade and greater private control over agriculture have enhanced prospects for foreign investment in African agriculture. At least 12 countries are initiating changes to promote foreign private investment, including relaxing foreign exchange controls, offering tax holidays, and publicizing investment opportunities. In Southern Africa, foreign investment involves the issue of sanctions against South Africa, which have been expanded in recent years. Divestment of foreign ownership in South Africa has proceeded rapidly, with agriculture less affected than mining, finance, or other areas of the economy with a strong foreign presence. South Africans have invested heavily in neighboring economies, but several of these countries, particularly Botswana, Mozambique, and Zimbabwe, no longer encourage this activity. However, South African enterprises continue to dominate the economies--and the commercial agriculture--of Lesotho, Namibia, and Swaziland.



## *Pricing Policy*

Consumer prices were raised on imports of subsidized food items in Guinea-Bissau, Sierra Leone, and Zambia, and in most food-importing countries that devalued their currency, as in Nigeria. The riots that accompanied price rises in Zambia in December 1986, like those earlier in North Africa, served as a warning that such policy changes would be difficult to implement.

Producer prices also were raised in many countries, mostly after 1983, to encourage import substitution of selected commodities. These measures represented a significant turnabout in the approach of socialist countries, such as Guinea-Bissau and Tanzania, which had not previously accepted higher producer prices as a legitimate tool for raising production. Higher prices for farm goods in Nigeria, Kenya, and other market-oriented economies demonstrated a renewed commitment to their rural populations. Zaire began restructuring its pricing policy in 1979 by eliminating producer price ceilings, but implementation of price decontrol did not reach many communities until 1983. Zambia also began raising prices in 1979, although major changes came later. Between 1982 and 1986, the real price of corn, Zambia's dietary staple, rose 185 percent. Official producer prices in Mali were raised in 1981 and 1982, before the food crisis, but not until the price rises of 1985 did support prices actually exceed domestic market prices. When government prices exceeded market levels over the past 2 years, however, the Sahelian countries of Mali, Niger, and Senegal were unable to fund purchases of all the grains offered by their farmers.

The handling of agricultural input subsidies demonstrated whether a country was committed more strongly to direct farmer assistance or to market allocation of resources. Despite the prevailing rhetoric supporting market allocation and reduced government expenditure, few countries cut subsidy rates significantly on strictly agricultural inputs such as fertilizer, pesticides, tractor hire, and research. Nigeria, for example, considered reducing fertilizer subsidies further in 1986, but soon decided to apply an overvalued exchange rate for fertilizer imports, effectively retaining the substantial subsidy. Ghana even increased

subsidies on inputs for cotton production. Contrary to trend, Senegal reduced fertilizer subsidies in 1985.

Many countries reduced subsidies on petroleum, a reduction that affected costs of mechanized agricultural production and transport. For example, petroleum user prices were raised substantially in Ghana, Nigeria, and Sierra Leone in the past year. Zaire's attempt to raise petroleum prices in April 1987, led to immediate strikes by minibuses and taxi drivers, and the price was reduced after 2 days.

As with input subsidies, export tax and tariff policies might reveal the relative value African governments give to active protection of agricultural producers vis-à-vis support for open market operations. But the results of these policies are ambiguous, with little pattern of change recognizable even in industrial commodities. Since export taxes and tariffs are focused so clearly on a single commodity, they are effective instruments for serving narrowly defined interests and thus may be chiefly used to appease agricultural or consumer groups who have rallied politically around the price of a single commodity.

## *Unresponsive Economies*

This review of agricultural policy changes after 1985 reveals a pattern consistent with the World Bank's liberalization objectives of 1981 and a few changes countering that pattern. Many countries, however, have not made major policy changes during the past 2 years. Some countries were not directly involved in the food crisis of 1983-85 and thus had less motivation to question existing policies. Of 45 countries in Sub-Saharan Africa, the United Nations identified 15 with food emergencies in 1984/85 and five more with threatened food supplies.

Some of these countries and others, including Liberia and Cameroon, had already undertaken policies to promote freer trade and greater private sector involvement in agriculture. Some countries, such as Ethiopia and Zimbabwe, continue to accept the efficacy of state-led rural development. Several states, such as Uganda and Mozambique, have wielded too little control to

effect new policies. The major reason for not modifying agricultural policy, however, has been preoccupation with national security. Civil wars remain active in at least seven countries with a combined population representing about 30 percent of Sub-Saharan Africa.

Socialist countries also are taking steps to liberalize their economies despite ideological impediments. For example, Tanzania has relaxed Government control and is experiencing some recovery from the precipitous decline in indicators of aggregate performance. However, neither the adjustments in Tanzania nor the recovery have been large enough to confirm a strong relationship between them.

Ethiopia did not accept major readjustment of the Government's role in its economy. Ethiopia's 3-year plan beginning in 1986/87 aims at increased agricultural production toward food self-sufficiency. It relies on similar instruments and about the same percentage of the budget allotted to agricultural investment as in the past. However, its overall level of spending is ambitious since nearly half its budget is designated from external grants (13.5 percent) or loans (35.2 percent). However, funding the budget will be hampered by U.S. law, which prohibits assistance to development projects in that country, and by unofficial British policy opposing aid.

Mozambique has been more successful in attracting additional foreign aid despite its adherence to socialist policies in agriculture. Softer rhetoric in Mozambique and an interest in offsetting South African influence probably account for greater aid to Mozambique.

Zimbabwe retained its fundamental approach to rural development and lost U.S. support, yet it had exceptionally productive years following the 1984 drought. Agricultural prices were extensively controlled, while record food levels were produced in 1986. A major drought has reduced 1987 output, but 2-years' supply of grain stocks are available to avert famine.

### Evaluation of Policy Changes

Post-1985 policy changes have not been in place long enough to fully evaluate their

impact on agricultural performance. Changes in weather and international markets, and program adjustments during the start-up period obscure the impact of policy shifts. Several programs were partially or fully retracted, such as the petroleum price rise in Zambia (retracted after 2 days), or the constant vacillation of tariff rates and import licensing.

Although there is little experience to guide evaluation of new policies, data are available to analyze the programs they replace. A USDA study found that the net effect of agricultural policies in Nigeria from 1977-85 was to tax producers more than 17 percent of the farmgate value of wheat, corn, rice, sugar, cotton, and cocoa (8). These crops, all imports but cocoa, constitute the major agricultural commodities traded internationally by Nigeria. Overvaluation of Nigerian currency was the dominant policy, overshadowing support given to producers via tariffs and subsidies on fertilizer, credit, pesticides, and prices. The devaluation in October 1986 dramatically increased the value of these crops to Nigerian producers by raising the price of imported substitutes.

The effect of Nigeria's policy on consumers was to subsidize 18 percent of retail value. Again, overvaluation accounted for most of the effect, so the 1986 devaluation is likely to raise retail prices on imported commodities regardless of changes in other policies.

The results in Nigeria demonstrate the increased incentives from devaluation to producers of traded crops. If lack of incentives had limited aggregate production, production may soon rise. The results also suggest that previous policies tended to favor wheat and corn producers, and consumers of imports. Since these consumers were generally urban, the recent policy changes represent a shift toward support of rural people. Producers of selected commodities, such as wheat and rice, remain protected by a ban on imports. The staples of the rural Nigerian diet, millet, sorghum, cassava, and yam, continue to attract little direct policy intervention so the impact of these changes on the typical rural consumer is minor.

Policy effects on cotton producers in Sudan were measured for 1982-84, revealing a



tax on producers of 11 percent of farmgate value. As in Nigeria, the most important policy was overvaluation. Without this policy, the impact of government policies would have been to subsidize nearly 40 percent of value to producers.

Exchange controls in South Africa were insufficient to result in a net tax on producers of wheat, corn, and sugar from 1982-85. Instead, prices and credit support, and constraints on sugar importers combined for a net subsidy of 37 percent of farmgate value. Consumption of three commodities together was subsidized by less than 9 percent of retail value, although individual crops differed strongly. Sugar consumption was actually taxed at a rate of 31 percent because the cartel of sugar importers has its constraints on input quantity and resulting higher prices backed by the Government. Sugar producers benefited by 73 percent of their crops' value. Wheat consumers were subsidized 30 percent of retail value, mainly as a result of price subsidies on bread. Net subsidies to wheat consumers were relatively low in 1982 and 1983 due to high prices paid to wheat producers. Corn, the largest crop consumed in South Africa, was subsidized by 20 percent of value to consumers and taxed by 33 percent of value to producers, mainly through low prices paid by the marketing board. Government support for these three crops shifted significantly toward consumers in 1985, although the aggregate level of intervention was fairly consistent over the 4 years in USDA's study.

The recent history of government involvement in Sub-Saharan commercial agriculture shows a pattern of net support for consumption and net taxation for production. Principal mechanisms of government intervention have been associated with international trade through government trade monopolies, direct trade barriers, regulation of foreign investment, and foreign currency restrictions. Relatively low levels of support to producers of selected crops have come from input subsidies, research, and irrigation. Consumers tended to benefit from currency overvaluation and subsidized retail prices. Under pressure from international donors and lenders, and from declining or disastrous domestic consumption levels, African governments have tended to accept more privatization in marketing. Specific

commodities often retain protection from market forces, but the effects of currency devaluation pervade many African economies. The success of this strategy cannot yet be demonstrated definitively, although early signals show little evidence of strong positive improvement in agriculture. [Carl Mabbs-Zeno]

## AFRICAN DEVALUATION EXPERIENCE

A recent USDA study, "Response to Exchange Rate Adjustment in Developing Countries," evaluated the performance of 12 African countries that had devalued their currencies between 1980 and 1983 (9). The countries followed similar adjustment policies, as recommended by the IMF, although details of the devaluations varied considerably (table 4). Based on the 3-year average after devaluation, export earnings declined in eight countries that had shown positive growth trends before devaluation. In three countries (Ghana, Sierra Leone, and Uganda) a negative average 3-year growth rate before devaluation changed to a positive rate after devaluation, and in one country (Mauritius) exports grew but at a slower rate than before. Examination of annual changes after devaluation demonstrated that in the first year, in 11 of the 12 countries, export revenues declined. In the following years, the number of countries with negative export earnings growth declined to seven in the second year, and four in the third year (table 5).

To examine whether the exporting country was faced with an increasing or decreasing trend for its exports, the average

Table 4- Currency devaluations in Sub-Saharan Africa, 1980-83

Country	Year of 1st Deval- uation	Reduction in nominal value		
		1st year	2nd year	3rd year
Ghana	1983	20.27	90.24	52.29
Kenya	1981	17.98	17.17	17.95
Madagascar	1981	22.23	22.30	18.77
Mauritius	1980	16.75	13.96	17.81
Sierra Leone	1983	26.22	33.15	88.45
Somalia	1982	41.44	31.91	21.14
Sudan	1982	42.96	27.85	0.00
Tanzania	1982	10.76	16.69	27.13
Uganda	1981	85.23	46.70	38.92
Zaire	1980	38.25	36.13	23.76
Zambia	1981	9.20	6.44	25.78
Zimbabwe	1982	8.83	25.06	18.78

SOURCE: Africa and Middle East data base, USDA-ERS

Table 5- Performance following devaluation  
in 12 Sub-Saharan countries

Indicator	Number of countries in which the listed indicators increased after devaluation			
	1st year	2nd year	3rd year	3-year average
Exports	1	4	8	4
Imports	3	4	3	4
Balance of Payments	4	7	9	4
Real GDP	11	7	9	10
Inflation	9	7	7	10

post-devaluation market share in the industrial countries (United States, EC, and Japan) was extrapolated for the period after devaluation. The difference between actual market share and its projected level showed the performance of the country's export sector. A positive difference would indicate improvement in export performance after devaluation; a negative difference would imply that exports failed to keep pace with demand growth even though they might have performed better than in the earlier period. In terms of market share, the 3-year average before and after devaluation showed a decline in export performances in four countries and a rise in others.

The historic pattern of import growth before devaluation was positive in all of the countries. After devaluation, the imports of eight countries declined in the first year. In the second year, a different mix of eight countries reduced their imports, and in the third year nine countries showed a negative rate of import growth. Somalia is the only country with positive import growth over the 3-year average, both before and after devaluation, as a result of the large import increase in the first year after devaluation. Concessional financial assistance is one of the main sources of foreign exchange for Somalia, and during 1982-84, the country was faced with severe drought, a conclusion that could explain increased imports. In other countries with positive import growth, adoption of the adjustment policy led to an injection of a new line of credit that relaxed some import constraints, especially in the first year after devaluation. The overall examination of annual changes showed that import response to devaluation was slow, a finding that might imply a deliberate policy by the government to gradually shift the consumption pattern.

The intended effects of depreciation were to improve the trade balance and, consequently, reduce the current account deficit. The study countries had a cumulative positive trade balance in 1970. From 1970 to 1980, however, the positive trade balance of \$684 million turned into a \$1.8 billion deficit. In the first year after devaluation, the trade deficit of these countries increased, with eight showing a deterioration in their trade balance. In the second and third year following devaluation, the overall trade balance improved, showing a cumulative gain of \$327 million. Overall, the number of countries with a trade surplus increased through time. After the first policy shock, five countries showed a surplus in their trade balance followed by continued improvement, seven countries showed a surplus in the second year, and nine countries in the third year. Kenya and Sudan showed the largest gain in the trade balance.

The intended effect of currency devaluation on domestic prices is to raise initially the domestic wholesale price of exports and retail price of imports. The subsequent resource allocation toward export production would generate enough efficiency to offset any long-term rise in overall price levels. The behavior of the study countries, however, showed that devaluation did not reduce inflation rates in the early years. The average 3-year rate after devaluation was higher than the 3-year rate before devaluation. After the first year, inflation rates remained stable in all countries. The high level of inflation reduced substantially the impact of the exchange rate adjustment. After devaluation, in about half the study countries, inflation rates rose by an amount higher than the extent of devaluation, vitiating any real effect.

The increase in inflation rates was due to the countries' inflexible economic structures, which directly influenced the direction of response to policy change. For example, one important aim of devaluation is to increase production of substitute commodities to replace imports. In most countries, a large number of domestic industries are dependent on imported inputs for which domestic substitutes are not usually available. In addition, the industrial sectors of these countries are oligopolistic, which gives them the ability to set prices based on production



costs rather than on competitive forces. The increase in the cost of imported inputs can be followed by higher prices for domestic substitute inputs, both raw materials and labor. Following devaluation, many countries (Sudan, Zambia, Ghana, etc.) announced wage freezes and reductions, although periodic adjustments were made because of labor union pressures.

The effect of exchange rate adjustment on real GDP depends on the speed and extent to which resources move into the traded goods sector. In the first year following devaluation, average income growth in the study countries was less than half the historic level (1966-79), but higher than the 3-year average before devaluation. In the longer term, the second and the third year after devaluation, average economic growth in the countries remained stable. While higher import prices have a positive impact on the demand for domestic output through substitution effects, the net impact depends on the relative size of the imports and exports. If imports substantially exceed exports, there will be a negative income effect; that is, the high income generated by the export sector will be offset by higher import costs. In many study countries (Madagascar, Somalia, Sudan, Tanzania, etc.) export values were about 50 to 60 percent of imports during the 3 years before devaluation. With the expected low import demand elasticities (less than .4), slow economic activity in these countries should have been expected. The contractionary demand policies in most countries have resulted in a significant decline in wholesale and retail trade.

The record of economic performance by these countries was less than satisfactory. The average GDP growth rates over 3 years after devaluation declined in seven countries. Two countries had negative rates. This pattern of performance did not improve much on an annual basis. In the first year, six countries registered slow growth, two with negative rates. In the second year, six countries showed declines in growth rates (five negative) and in the third year, the number of countries with declining growth rates increased to eight (three were negative).

The results indicate that the net impact of a policy change, such as devaluation, may deviate from expectations because of policy

environment and economic structure of countries. Conflicting policies, behavior of external factors, and the initial economic structure of the market could erode the impact of devaluation, leading to a substantial distortion in the economy. [Shahla Shapouri]

## FINANCIAL SITUATION

Despite improved weather conditions and efforts aimed at policy reform, 1986 could be considered one of the worst years for Sub-Saharan Africa in terms of external performance. This, in part, reflects declining commodity prices and growing financial constraints. The large fall in oil prices had been expected to stimulate world trade, as it did, but the unexpected also occurred--the decline in terms of trade resulting from further reduction in the prices of primary commodities. Total export earnings of the region fell by about 20 percent. The aggregate figures reveal considerable diversity in the situation facing individual countries. Earnings in oil exporting countries fell by almost 40 percent despite higher export volumes. Only exporters of coffee and peanuts were exceptions. Considering the pattern of change in the commodity market (toward manufactures), prices for primary commodities are expected to improve little, if at all, in 1987.

The region's financial performance largely reflected external forces. Total debt, at \$85 billion, has been increasing relative to the size of the region's economies--currently about 50 percent of GDP (see debt article). Many reforms have been undertaken to try to relieve these problems. Demand management via reductions in imports and consumer subsidies, and devaluation to increase import price and provide incentives for exports are among the policies. Efforts to enhance the functioning of markets, particularly resource allocation, continue to receive high priority in most countries. Programs that privatize marketing have been implemented or announced in many countries.

External performance also played a role in determining the pace of output achieved in individual countries. During the last 2 to 3 years, more than half of the countries



experienced stagnating real per capita incomes. In several countries, real per capita incomes declined because of slow recovery from the drought (Ethiopia and Sudan) and lower export prices (oil in Congo), among other factors. In 10 countries, real per capita incomes grew. However, the high growth in many countries was due to a low base in 1983–84 (in Ghana, Guinea-Bissau, and Senegal), not to a continuous increasing trend. A few countries, however, have undergone marked economic growth. In Mauritius, successful export-oriented policies have contributed to a strong manufacturing sector. In Malawi and the Central African Republic, agricultural policies have resulted in increased output. In Cameroon, growth can be attributed to stronger agricultural and manufacturing sectors.

### *Trade Balance*

Trade plays a vital role in the economies of Sub-Saharan countries. This region is dependent on imports of food, energy, and capital inputs to complement domestic products. With declining external assistance, exports have become the principal source of financing imports.

The high point of the balance of trade surplus, \$15 billion, occurred in 1980, a year of unusually high exports, particularly of oil (figure 11). The large surplus was followed by 2 years of deficits as exports dropped considerably while imports remained high. Since 1983, the region has experienced trade

surpluses, amounting to about \$3 billion in 1986. The improved trade balance has been a result of a steady decline in imports, which has outpaced the decline in exports.

The trade surplus is highest, about \$4 billion, in Southern Africa. This is due entirely to the performance of South Africa. The remaining Southern African countries each show a small trade deficit. The Central African countries usually experience a trade surplus, primarily due to Gabon. The East African countries usually run a trade deficit, which is fairly evenly divided among Ethiopia, Kenya, Somalia, Sudan, and Tanzania. In general, each of these countries depends on a single commodity, whose price has declined, for all export earnings. Nigeria dominates West African trade performance. The subregion ran a large surplus in 1980 after the second oil price hike, followed by a couple years of deficit. Recently, the trade balance has been in surplus due to Nigeria and Cote d'Ivoire. Excluding these two countries, the subregion has a significant deficit.

### *Exports*

In 1986, Sub-Saharan exports totaled more than \$40 billion, about a 20-percent drop from 1985. Even more important, 1986 earnings were just 55 percent of their 1980 peak level. Almost 80 percent of the exports originate from Southern and West Africa, with South Africa and Nigeria the largest exporters.

Earnings in West and Central Africa closely follow fluctuations in oil prices. In 1980, earnings in West Africa rose by more than 40 percent, while those in Central Africa increased by almost 22 percent. As oil prices fell between 1985 and 1986, earnings in both regions dropped 30 percent. South Africa accounts for almost 80 percent of earnings in Southern Africa.

Earnings growth in East Africa varied widely from other regions in Africa—expanding by about 20 percent from 1985–86, primarily because of the increase in coffee prices, which boosted earnings in Ethiopia, Kenya, and Tanzania.

The major reason for lower earnings is lower prices more than reduced volume (figure 12). In dollar terms, prices for less developed country (LDC) exports in 1985 were at their

Figure 11  
**Sub-Saharan Africa's Balance of Trade**

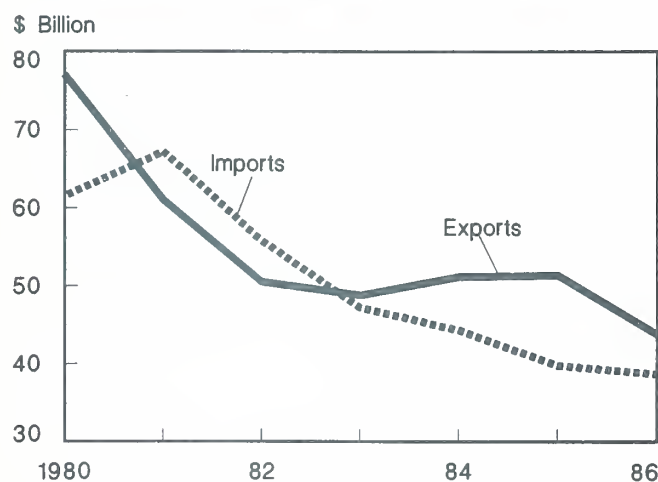
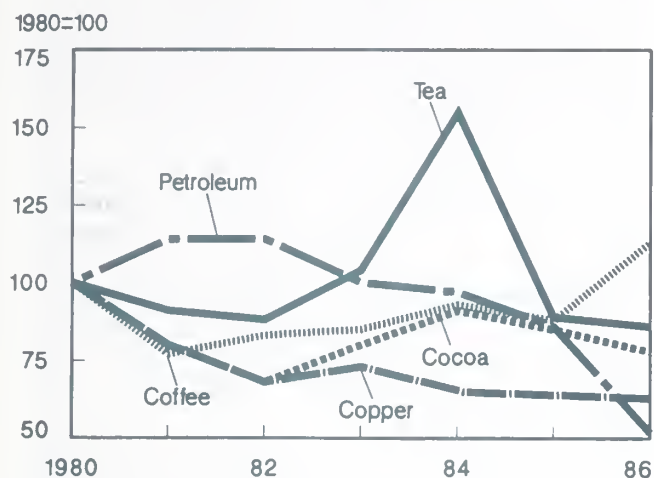


Figure 12  
Index of Commodity Prices



lowest since 1978. Since 1981, they have been lower than prices of exported goods from the developed world: prices of primary products dropped, while those of manufactures increased. This demonstrates the deteriorating terms of trade. Terms of trade recovered for most countries in 1985. Weak commodity prices can be attributed to slow growth of the developed world, inelastic commodity demand, and increased competition among suppliers that has contributed to increased stocks (10).

Coffee is perhaps the most important agricultural export in Sub-Saharan Africa, but by no means is Africa the price-setter. Total African output is less than that of Brazil, and price is mostly determined by production variations in Brazil and other Latin American countries (see cash crop section). This is vital when considering the level of dependency of many countries on this particular commodity: in Uganda, coffee accounts for more than 90 percent of export earnings; in Ethiopia, it is 60 percent. Higher 1986/87 production levels have been recorded in Brazil and Africa. As a result, stocks have increased and prices have fallen. In recent years, demand growth has not matched output growth. Hence, stocks equal about 70 percent of exports. This is bound to depress future prices and, hence, lower earnings for the major coffee producing countries in Africa, Cote d'Ivoire, Kenya, and Ethiopia (11).

Two other important agricultural exports are cocoa and tea. Africa is the largest producer and exporter of cocoa, accounting

for about 70 percent of world exports. Prices fell in 1986 following a record production year, along with the anticipation of another large crop. Despite the decline, earnings in Ghana (where cocoa contributes about 70 percent of export earnings) increased as output rose in response to higher domestic producer prices. Tea prices, which peaked in 1984, fell by almost 60 percent in 1985, but stabilized in 1986. Output in 1985 was a record. The current nominal price is equal to that of the early 1980's.

Another important source of earnings for many countries is metals, but recently prices have remained low relative to other commodities. The 1986 metal price was 65 percent of the 1980 price. The world recession of the late 1970's reduced demand for metals, and economic recovery has not strengthened demand because of the development of substitutes. This has had a severe impact on Zambia's economy, where copper accounts for 90 percent of export earnings.

Oil is a major export earner for several Sub-Saharan countries: Nigeria, Cameroon, Angola, Congo, and Gabon. Recently, oil revenues have fallen due to lower prices and weak world demand. According to the IMF, Sub-Saharan oil exporters lost more than \$8 billion in revenue in 1986, with balance of trade surpluses sharply reduced in these countries (12). Foreign exchange reserves, which acted as a buffer when prices began declining in 1983, have been drawn to low levels. As a result, expenditures, particularly investments, have been cut, and imports also have been reduced. These adjustments will continue as oil prices remain relatively low. Further import reductions will translate into more than just reductions in luxury and consumer goods. Capital imports may have to be cut, which could have severe ramifications for economic growth.

Government policies affect export levels significantly and, until recently, there were very few producer incentives for export crops. As a result of IMF programs, policy implementation has improved (see policy article). Following many years of declining real producer prices, recent increases have exceeded inflation growth. Research and extension services have been improved. The marketing board authority has been reduced



significantly, and in many cases boards have been eliminated. In addition, there have been efforts aimed at improving the road system to facilitate marketing of crops. The combined effect of these reforms should be an incentive to production. World prices, however, are not expected to recover soon, and unless measures are taken to diversify exports, earnings growth will remain sluggish.

### Imports

Sub-Saharan's total imports were almost \$40 billion in 1986, decreasing for the fifth consecutive year (but dropping only marginally from 1985). Imports peaked in 1981 near \$70 billion. Lower imports are due to foreign exchange constraints created by reduced export earnings and credit availability.

As is the case for exports, West and Southern Africa are the major importers, with Nigeria and South Africa importing the most. Declining oil revenues have forced Nigeria to cut imports—with the value reduced by one-third between 1985 and 1986. Lower mineral prices have reduced imports for South Africa as well. The East, Central, and the Indian Ocean countries have maintained import levels at a high cost, drawing on their reserves to continue importing at historical levels. However, in the near future, they also will have to reduce imports.

Food imports accounted for approximately 10 percent of total import value in Sub-Saharan Africa in the late 1960's (figure 13). In 1983–85, however, the food

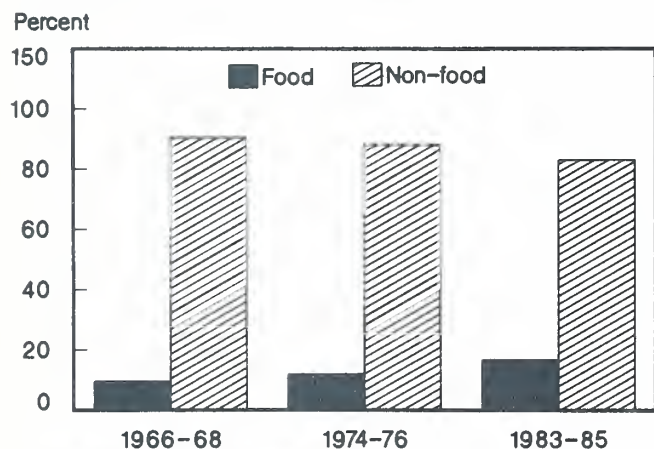
import share rose to more than 15 percent, a function of low agricultural productivity forcing higher imports. During the last 20 years, per capita production has declined in most countries in the region (see production article), making these food imports essential in maintaining food availability.

Food imports consist mainly of grains, wheat, rice, corn, and sorghum. These grains account for about 60 percent of the diet. Grain imports peaked in 1984, at the time of the drought, at about 15 million tons. Since 1980, grain imports averaged 10 million tons annually, and 1986's imports could be considered average.

More than half of the grain imports are wheat, with rice composing about one-third, and corn accounting for a large part of the remainder. Wheat and, to a lesser extent, rice are not traditionally grown in Sub-Saharan Africa. However, as more people have become exposed to these commodities, these have become preferred grains over locally grown grains such as millet and sorghum. Because wheat and rice production has not increased as quickly as consumer demand, imports have risen, especially since the late 1970's (figure 14). Most corn imports are in response to declining output, such as during the last several years in Mozambique, South Africa, Zambia, and Zimbabwe, where imports have increased as production has fallen below trend.

Nonfood imports include consumer items, energy and fuels, and capital inputs. Two decades ago, consumer goods, considered luxury items, accounted for 40 percent of total imports. But with financial constraints and austerity measures imposed by international financial organizations (such as the IMF), these imports currently account for 25 percent of the total. Capital imports, at 30 percent, now compose the largest share. This is an important transition when considering future economic development. Because there are no domestic substitutes, imports of capital inputs are essential for industrialization. Development of domestic industries will reduce dependence on the agricultural sector for economic growth and thereby reduce the vulnerability of these countries to external variables over which they have little control, including weather conditions, world production levels, and world demand.

Figure 13  
**Food and Non-food Imports<sup>1</sup>**



<sup>1/</sup> Includes 15 Sub-Saharan countries.



## Major Trading Partners

The industrial countries are Sub-Saharan Africa's major trading partners. The United States, EC, Canada, Japan, and Australia currently supply about 60 percent of Sub-Saharan Africa's imports. A decade ago, the share was more than 80 percent. The decline can be attributed to increasing oil

prices, which raised the value of the region's oil imports from other developing countries, such as Algeria, Tunisia, and Venezuela. The industrial countries are a market for 80 percent of the region's exports, a share maintained over the past 20 years.

In terms of agricultural trade, the United States and Sub-Saharan Africa are generally in balance, while the EC has a substantial deficit with the region. In 1985, the United States exported more than \$1 billion of agricultural commodities mostly to Nigeria, Sudan, Ethiopia, and South Africa. U.S. imports were more than \$1 billion-- about half coffee and cocoa from Cote d'Ivoire. The EC, on the other hand, exported \$1.7 billion, and imported \$5.5 billion in 1985. EC trade is not as concentrated among few partners as is U.S. trade.

The EC and United States supply roughly half of Sub-Sahara's agricultural imports. In terms of agricultural exports, the EC and the United States account for about three-fourths of Sub-Sahara's sales, with the EC holding a much larger share. With this degree of dependency, Sub-Saharan Africa is concerned about the value of the dollar (which changes the relative costs and returns from trade) and protectionist measures imposed by both the United States and the EC, making it difficult for Sub-Saharan products to enter these markets.

## Trade Outlook

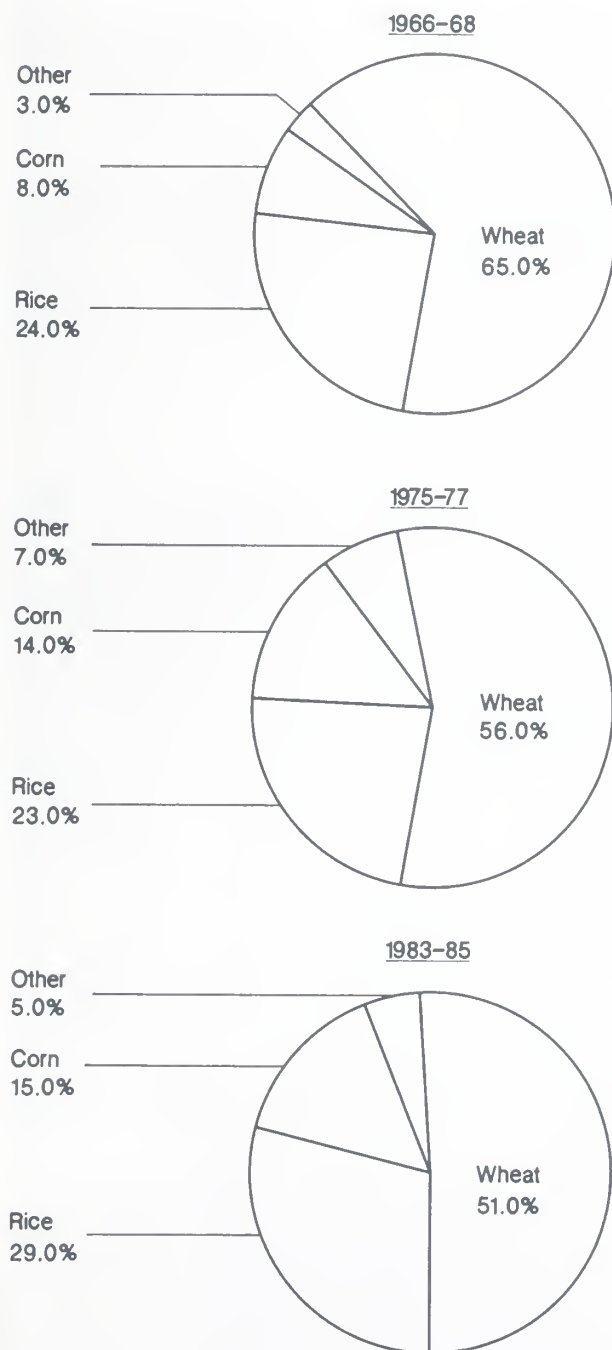
Sub-Sahara's trade outlook depends on key external factors such as growth of export markets, terms of trade, foreign financial flows, and access to industrial markets. The internal factors are weather in exporting countries, resource allocation, policy implementation, transportation and marketing infrastructure, input availability, and civil strife.

## Expected Import Capacity

Results of a USDA study on import demand ("Effect of Fiscal Austerity on African Food Imports," Foreign Agriculture Economic Report, May 1987) indicate that the response of import capacity to a change in credit and export earnings is positive and very strong (13). This means that reductions in

Figure 14

## Composition of Grain Imports



these variables will result in some import reduction. If recent trends continue, further import cuts can be expected. Since expanding about 20-fold between the late 1960's and 1983, capital flows have stagnated over the last few years. With increased debt service burdens and donor concern about the inefficiency of credit use, it is unlikely that credit flows will be restored to historical levels. Credit worthiness depends on the borrowers' export performance, implementation of domestic fiscal policies, domestic rate of economic growth, international liquidity, and the domestic debt service ratio. Implementing fiscal policies seems to be the only area in which this region has made progress in improving its credit worthiness. But to date, an increase in credit has not been significant because of the poor performance of the export sector. Continuation of this trend portends further deterioration of their current account, which reduces investment opportunities for development of domestic industries.

This study also found that food import demand was inelastic, meaning that the response to a decline in expenditures is proportionately less than the initial decline in expenditures. Therefore, when adjustments must be made in imports, nonfood imports will be reduced. Recent trends support this finding. According to the USDA study, reducing imported inputs will have a significant impact on the level of export earnings and will adversely affect the export sector. An estimation of economic growth for 25 African countries determined that export performance had a positive and significant effect on economic growth. Therefore, if recent trends continue and imports of capital inputs must be reduced, the export sector will suffer and result in a stagnating economy.

### *Export Outlook*

Most of the region's exports are agricultural and characterized by production and price instability and earnings volatility. Demand for the region's primary exports is not expected to expand significantly in the near term. For example, there has been some shift from coffee and tea consumption to soft drinks in both the United States and Europe. Furthermore, OPEC's inability to agree on production levels, the increase in suppliers,

and the reduction in consumption suggest that prices are unlikely to regain the levels of the late 1970's.

Competition between food and cash crops will intensify. With per capita food production and imports declining, more acreage will have to be devoted to food crops. However, because of the limited availability of cultivated land area (due to population pressures and eroded land), the expansion of area for food crops will come at the expense of export crops.

Export contraction will adversely affect economic growth, which will be constrained as lower earnings reduce imports of capital goods. In addition, the transfer of resources from the rest of the economy to the export sector will be curtailed because that sector will not be considered productive. This could lower a country's overall growth rate because the export sector is usually the most productive and the most open to economies of scale.

### *Performance and Policies in Developed Economies*

Specific policies and economic performance in developed countries can play a key role in the region's financial situation. Economic growth and inflation, protectionism, and changes in interest rates and exchange rates are the major factors affecting the economy. Reduced economic activity in industrial countries results in downward pressure on the prices of nonoil primary commodities. Therefore, accelerated growth in industrial economies improves the terms of trade of Sub-Saharan exporters, particularly those of primary products as opposed to manufactures. Faster growth of real incomes in industrial countries raises the demand for LDC exports. These factors ultimately raise LDC import capacity. According to the IMF, a 1-percent increase in the real GNP in industrial countries will increase the purchasing power of exports by nonoil developing countries by 3.4 percent. Accelerated economic growth in the industrialized countries would have the greatest impact on the export volumes of exporters of manufactures and the largest impact on the terms of trade of primary exporters (14).



Undervaluing currency in an industrialized country to accumulate balance of trade surpluses limits LDC exporters by making their goods relatively expensive. Protectionist policies will also have an adverse affect on LDC exports by lowering demand for the goods and thus lowering prices. According to a recent IMF study, "Effects of Increased Market Access on Exports of Developing Countries," trade liberalization in industrialized countries could result in 5 to 10 percent real growth in exports of developing countries (15). [Stacey Rosen]

## SOUTH AFRICA AND TRADE SANCTIONS

Following the 1986 Congressional override of a Presidential veto, stiffer U.S. trade sanctions against South Africa are now in place. Among them are the prohibition of U.S. purchases of coal, steel, iron, uranium, textiles, and agricultural commodities and products (U.S. agricultural exports are not prohibited.) The EC and Japan also banned imports of selected commodities, which is expected to have a serious, but not critical, economic impact on South Africa. For the

## OPTIONS FOR INCREASING TRADE

Increased intraregional trade and barter could help expand African trade and reduce the impact of current financial constraints. By increasing regional trade, the small countries in Sub-Sahara could achieve economies of scale and diversify exports, while perhaps reducing border hostilities that plague the region.

Several groups in Sub-Saharan Africa have organized to facilitate intraregional trade. ECOWAS (Economic Community of West African States) consists of West African countries whose goal is economic cooperation. A subgroup of ECOWAS was established as a clearinghouse to promote the use of members' currencies for intraregional trade, encourage trade liberalization within the West African region, and coordinate monetary policies. SADDCC (Southern African Development Coordination Council) is composed of Southern African countries and is closely associated with the "liberation movement" in Zimbabwe, Namibia, and South Africa. PTA (Preferential Trade Area) includes Eastern and Southern African countries and emphasizes on trade actions such as reducing tariff barriers and import duties. The overall objectives of the integration schemes are expanded trade and investment, reduced external dependence, and an improved bargaining position for the region.

To date, official data show limited regional trade, less than 5 percent of total trade. However, border trade is estimated to account for a larger share. The difference in exchange rates among neighboring countries

and low transportation costs promote border trade.

In general, when import demand and export supply are matched, there is great potential for intraregional trade in Sub-Saharan Africa. In West Africa, for example, Nigeria exports oil to almost every country in the region. Cote d'Ivoire has substantial capacity to produce clothing to export to neighboring countries. Ghana could supply aluminum to Nigeria; Senegal and Gambia could supply Nigeria with much-needed peanut oil and cake.

These potential trade flows are not without problems, however. One major obstacle is the uneven distribution of costs and benefits among countries. Also, such trade would require more organization and policy planning than most African countries are willing to offer.

There are two major arguments against regional cooperation: 1) it could detract from worldwide integration, and 2) it implies discrimination against other possible trading partners. Such arguments are not necessarily valid in the African context because trade in these countries would have little impact on world trade. Regional cooperation would bode well for some landlocked African countries by reducing transportation costs. In addition, when export commodities of specific African countries are matched, there are numerous products with great potential for intraregional trade.

Another method to improve trade flows is countertrade, which is a bilateral



United States, the direct impact is minor. However, South Africa has threatened countermeasures against the United States and countries in Southern Africa, which would be hurt by retaliation.

### *Role of Trade*

South Africa's economy is a mixture of a strong and relatively well-developed commercial sector coexisting with the underdeveloped subsistence economies of the Black States. The economy's performance

arrangement—the exchange of goods for goods—similar to barter. Countertrade allows countries 1) to reduce the financial obligation of trade and to conserve foreign exchange for high priority imports, 2) to trade during periods of restrictive import policies, 3) to reduce dependence on a single supply source, and 4) to increase the ability to enter markets otherwise limited by quotas or other trade barriers. The products used in countertrade are usually homogenous (agricultural, minerals).

Nigeria's use of countertrade in 1985, exchanging petroleum for millions of dollars worth of agricultural and other commodities from Brazil, France, and Austria, is a good example. Nigeria resumed countertrade in 1987, and smaller countertrade deals were struck by Ethiopia, Ghana, Sudan, and Uganda in 1986 and 1987.

A slightly different arrangement is counter purchasing, which links the value of both exports and imports of unrelated products. The exporter sells goods to an importer and agrees to purchase a specified value of goods selected from a list provided by the trading partner.

These types of trade are well-suited for Sub-Saharan Africa, which has many highly valued resources. Africa has 97 percent of the world's chrome reserves, 85 percent of platinum, 70 percent of the cocoa production, and 25 percent of the uranium reserves. The exchange of such products for food or raw materials could greatly enhance the region's security and financial stability (16). [Stacey Rosen]

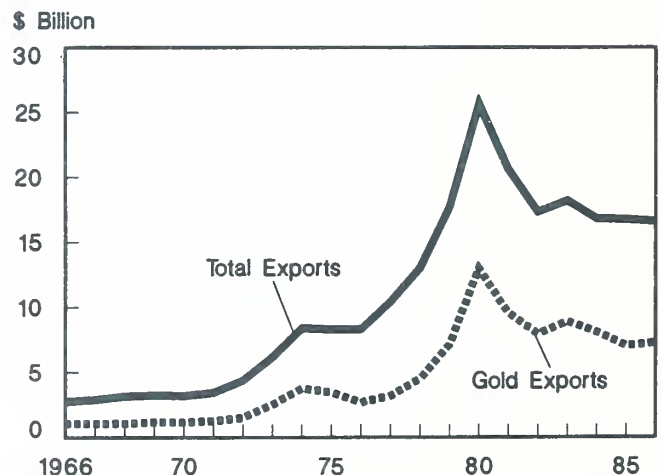
over the last decade has been strongly influenced by its trade sector, mainly the export of gold and other primary commodities.

Historically, South Africa's export growth strongly outweighed import growth, and the positive trade balance supported the economy (figure 15). Exports' contribution to the economy has varied; its share of GDP grew from 22 percent in 1970 to 36 percent in 1980 and declined to 34 percent in 1985, primarily due to gold price fluctuations. Mining has had the largest share of the export market, followed by manufactures and agriculture.

Since the early 1970's, the mining sector's share in export earnings has been stable. In 1985, earnings were about \$10 billion, more than 60 percent of total exports. The diversified nature of South Africa's mineral exports—especially strategic materials—has ensured a positive demand growth and steady increase in mining exports, despite significant mineral price fluctuations. Gold exports contributed 40 to 50 percent of mineral exports; coal is second with 4 percent.

Manufacturing has grown in importance, contributing an average 10 percent of non-gold exports during 1980–85. Initially, this sector was to cater to the domestic market and reduce import dependency. However, the sector was extended to produce investment goods and exports of both investment and consumer products.

Figure 15  
**Trend in South African Exports**



Although agriculture's role has diminished, its export contribution remains at 7 to 9 percent of total non-gold exports. When processed foods are included, its share rises to 16 to 20 percent. Commercial agriculture, entirely in the hands of white farmers, contributes between 5 to 7 percent to GDP. This small share does not imply a decline in importance, but rather indicates the higher growth of other sectors.

The value of South Africa's merchandise imports increased from an average \$3.6 billion from 1978-80, to \$20.6 billion in 1981, declining to \$10.4 billion in 1985. Part of the decline was caused by a 65-percent drop in the value of the Rand, which led to higher prices for imports. The share of imports in the economy, however, did not decline as much as import value diminished. In 1970, total import value was about 25 percent of GDP, in 1980, 27 percent, and in 1985, 24 percent. The high import dependency raises concerns over the future import trend and its implication for the country's economic performance.

The structure of imports is unchanged. Capital and intermediate goods account for nearly two-thirds of total imports including machinery, and electrical and transport equipment. Imports of intermediate items remained at 22 to 25 percent, with crude oil and product imports composing the largest share. The country depends on oil imports for about 20 percent of its energy needs. Since 1950, coal has been used to produce petroleum products and to reduce import dependency. These import substitute policies, while reducing South Africa's import dependency, substantially increase domestic costs, while world prices are low. South Africa is self-sufficient in most agricultural products, and food imports have ranged from 2 to 7 percent of total imports.

### *Trading Partners*

South Africa's major trading partners are limited to the developed countries. Trade with the United States, the European Community, Japan, and Switzerland accounted for 75 to 80 percent of total trade during the past 15 years. The EC remains South Africa's largest market, with a 35-40 percent share, and the United States is second, with a 10-15 percent share. Japan has the fastest growing market, followed by Switzerland at 14 and 7

percent, respectively. South Africa's exports to neighboring countries ranged from 7 to 10 percent in the last decade. Exports to Asian countries, such as Taiwan and Hong Kong, have grown in recent years.

### *Sanctions Take Effect*

Of South Africa's major trading partners, the United States has imposed the severest sanctions, banning imports of gold coins, coal, steel, iron, uranium, textiles, agricultural products, and new investments. These measures are much milder than those originally proposed by U.S. critics of South Africa's racial policies. EC sanctions are weaker, including a ban on new investments and on imports of gold coins, iron, and steel. Coal, South Africa's main export to the EC, is excluded.

Japan banned imports of iron, steel, and gold coins, but like the EC, did not ban coal, for which South Africa has the largest share of Japan's imports. Taiwan and Hong Kong have not yet set restrictions. Comprehensive trade sanctions, however, could have severe implications for the country's economy.

In the near term, sanctions on exports are expected to have some deleterious effect on South Africa's export earnings. International competition for most of the primary commodities produced in South Africa is considerable. South Africa is the largest supplier of gold to the western countries; the second largest exporter of diamonds, platinum, and uranium; and among the top suppliers of coal and other minerals such as nickel and copper.

With continued political unrest and the possibility of broader sanctions, South Africa is attempting to diversify its trading partners. Non-African developing countries' share of South Africa's imports grew from 16 percent in 1980 to 30 percent in 1985. Although, the share of the export market held by the developed countries remains significant, the U.S. share could be replaced by growing markets in Asia. However, for some commodities such as coal, alternative markets will be difficult to find.

### *Agricultural Exports*

Although U.S.-South African trade is large, agricultural trade is small, averaging



\$86 million during 1980-85, and representing less than 4 percent of total imports from South Africa. For South Africa, the U.S. market is important, taking about 10 percent of agricultural exports in 1985, including apples, canned pineapples, other fruits and products, sugar, and wool. South Africa is likely to experience difficulties in finding alternative outlets for these products, leading to substantial price-cutting and revenue loss.

### *South African Countermeasures*

During the U.S. debate on sanctions, South Africa threatened to curtail purchases of U.S. grain if sanctions were approved. It also threatened to prohibit the use of its transportation facilities for U.S. grain exports to contiguous Southern Africa countries.

Although not a regular or large wheat importer--South Africa bought about 300,000 tons, 156,000 from the United States in 1986--South Africa is likely to increase wheat imports if low domestic output continues. Other U.S. grain sales, mainly of rice, are small and have declined in recent years as South Africa increased imports from Thailand. Purchases of corn ended last year as exports resumed. This follows large imports resulting from the droughts of 1983 and 1984. Hence, future sales will probably occur only with poor weather. South Africa imported about 500,000 tons of grain during 1986, with 250,000 tons coming from the United States. It exported about 2.1 million tons.

The potential impact of South Africa's port closings on U.S. grain destined to neighboring countries depends largely on the country concerned and the availability of alternative supply channels. Port closures would not necessarily stop U.S. exports, but they could add considerably to freight costs, which are largely paid by the United States since most shipments are food aid. In 1985, the United States exported just more than 400,000 tons of grain to these countries and slightly less in 1986. Only one-fourth of these shipments went through South African ports.

### *Vulnerability of Neighbors*

If South Africa implements countermeasures and reduces trade with its neighbors, serious food crises and economic problems could arise. Further complicating

the situation is the region's susceptibility to drought. A dry season, as in early 1987, with low output and higher import requirements could jeopardize the food situation and raise the stakes involved with sanctions and countersanctions. So far, South Africa has not resorted to counteractions toward neighboring Sub-Saharan African countries.

Smaller countries such as Lesotho, Botswana, and Swaziland are the most vulnerable to South African pressure. Lesotho is highly dependent on grain imports, with about half bought from South Africa. Botswana depends on grain imports for 90 percent of its requirements. Most is imported from South Africa. Though less dependent, Swaziland gets most of its grain imports from South Africa as well.

Other countries in the region are less vulnerable. Zambia's grain imports move through South Africa but could be rerouted through Dar es Salaam in Tanzania. Angola and Mozambique have their own ports. Zaire uses South African rails and ports for much of its trade. However, most of its grain imports move through its own port of Matadi. [S. Shapouri and L. Witucki]

## **AFRICAN DEBT CRISES AND AID FLOWS**

The use of external debt to supplement domestic savings in financing economic growth has been the rule in developing countries. The industrial development of Canada, Argentina, and Australia as well as Russia and the United States during the late 19th and early 20th centuries relied heavily on external finance. Since the Second World War and the establishment of the World Bank and the IMF, increasing amounts of funds have been lent to contemporary developing countries. External debt is not a problem as long as the debtor nation can meet its repayment obligations by generating the necessary foreign exchange through increasing the value of its net exports. When net export earnings fail to cover loan payments, a debt crisis occurs. The rise in interest rates in 1980-1982 and the simultaneous slump in primary commodity prices propelled many nations into a foreign exchange liquidity squeeze--they lacked the foreign exchange needed to cover both essential imports and their debt service payments. Although the liquidity squeeze is the proximate cause of a debt crisis, many



longrun factors can contribute to liquidity problems.

### *Different Types of Debt*

Most studies of the "world debt crisis" have focused on Latin America because the three largest debtors not belonging to the Organization for Economic Cooperation and Development (OECD)—Brazil (\$107 billion), Mexico (\$97 billion), and Argentina (\$48 billion)—are in Latin America; because a large proportion of Latin American debt is commercial debt; and because U.S. commercial banks are the most at risk of default.

The external debt of Sub-Saharan Africa, in contrast, is primarily from official bilateral and multilateral sources. But even this generalization is misleading: only a handful of Sub-Saharan countries—primarily oil exporters—account for most of the region's outstanding commercial debt. The remaining debt is predominantly concessional debt.

### *Private Commercial Debt*

Table 6 contrasts the top 12 Sub-Saharan nations in terms of the proportion of private external debt (accounting for 87 percent of the region's disbursed external commercial debt) to major borrowers in Latin America, Asia, and North Africa. The proportion of private debt is considerably higher in the latter group. This is hardly a surprise; almost all of Sub-Saharan Africa is at a much lower level of economic development than the industrializing nations of Latin America and Asia. The potential hard currency return of a commercial loan in most of Africa is either too low—especially in terms of foreign exchange—too costly to initiate and administer, or too risky relative to equivalent rates of return elsewhere.

Of the top seven Sub-Saharan nations (those with at least 30 percent private debt) all but two are oil exporters (figure 16). Economically exploitable reserves of oil are assets that can be converted and valued in foreign exchange terms, and provide a good indicator to lenders of the borrower's debt-servicing capacity. Much borrowing in these countries, as in most developing nations, is done by the public sector or by publically guaranteed agencies. The two nonoil

Table 6- Sub-Saharan and non-Sub-Saharan African borrowers, ranked by proportion of private to total external debt

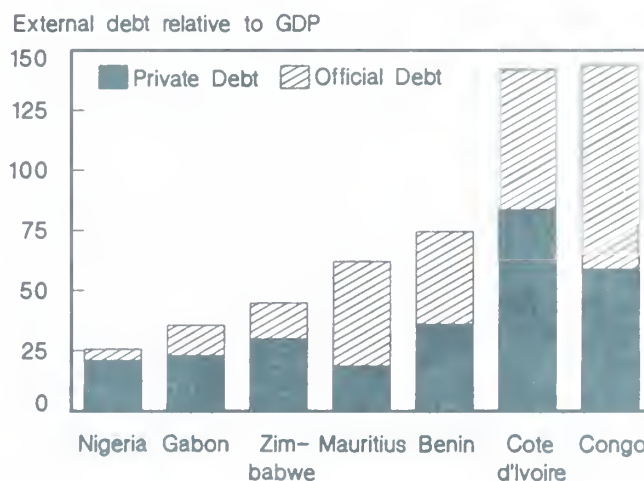
Rank	Country	Percent	\$ Billion	Basis for lending
1	Nigeria	82	14.96	Oil exporter
2	Zimbabwe	67	1.43	UDI
3	Gabon	65	.73	Oil exporter
4	Cote d'Ivoire	59	4.98	Oil exporter
5	Benin	48	.38	Oil exporter
6	Congo PR	41	.99	Oil exporter
7	Mauritius	30	.19	Export zone/sugar
8	Sierra Leone	26	.14	Mining: diamonds, iron
9	Madagascar	24	.63	Agro-industry, mining
10	Niger	23	.27	Uranium
11	Zambia	23	1.05	Mining: copper
12	Chad	22	.04	Agriculture: cotton

Country	Percent	\$ Billion
Venezuela	98	31.4
Argentina	88	42.9
Mexico	88	86.1
Chile	83	16.7
Brazil	81	86.5
Algeria	80	12.6
Malaysia	76	NA
Korea	65	31.2

UDI= unilateral declaration of independence.

Figure 16  
Financial Ratios for Major Private Borrowers



exporters are Zimbabwe and Mauritius. Zimbabwe was barred from external borrowing from 1965 to 1980. At independence in 1980, Zimbabwe emerged with a sterling credit rating and began to borrow heavily to finance public spending. Mauritius is an anomaly in Africa. The small Indian Ocean island nation has an Asian population, the highest literacy rate, the longest life expectancy, and an export-led path of development along the lines of Taiwan, Singapore, and South Korea. Much of Mauritius' private debt and direct investment since 1975 is of Asian origin—its sugar sector attracted commercial lending prior to 1975.

Most commercial debt of the remaining nations was incurred during the late 1960's and 1970's, usually on the strength of mining or promising agro-industrial sectors whose markets have subsequently slumped (e.g., uranium in Niger, copper in Zambia). The sole exception on this list is Sudan, which in addition to agro-industrial ventures borrowed commercially for the import of petroleum during the 1970's.

### *Official and Multilateral Debt*

In contrast to these few nations with relatively high proportions of private debt, most Sub-Saharan African nations have little private debt. Cape Verde, Sao Tome e Principe, Rwanda, and Comoros carry no private debt. Most credit has come in the form of Official Development Assistance, usually subsidized interest rate loans from a developed country to the African government or loans from multilateral institutions such as the World Bank, the IMF, and the African Development Bank (AfDB).

Multilateral institutions generally operate two "windows" for disbursing credit—one at market interest rates and another at subsidized rates. Loans from the latter—often called soft loans—are reserved for low income nations (as measured by per capita GDP). By the World Bank group's lending criteria, there are 10 Sub-Saharan nations considered ineligible for soft loans—the seven countries with the highest proportion of private to total external debt (except Benin), Botswana, Cameroon, Angola, and Swaziland (17).

The International Finance Corporation (IFC), affiliated with the World Bank but not part of the Bank, administers International Development Association (IDA) loans, which usually have a 10-year grace period and a 40-year repayment period. In most cases, there is no interest charge, although an administrative processing fee is assessed. Given the inflationary tendencies of OECD central banks, these loans carry negative real rates of return. The AfDB operates the African Development Fund (AFD) in an analogous manner.

Official lending refers to loans from one government to another. The (OECD), which consists of 24 developed market economies, compiles statistics on Official Development Assistance (ODA)—this lending is exclusive of lending for sales of military equipment.

Under ODA lending during the early 1980's, the average interest rate was 3 percent, the average grace period was 8.3 years, and the average maturity was 30.4 years (18). Most of the value of bilateral overseas lending is tied, in one form or another, to the purchase of materials or services from the lending country. Much of the value of ODA is a transfer of donor's public funds back to its own citizens.

Most development assistance has been used to provide public services, particularly health, sanitation, education, and rural credit—priorities established by the World Bank during the 1970's in its "Assault on World Poverty" program. Such public expenditures, by yielding healthier, better educated, and ultimately, more productive citizens, are meant to help provide the foundation for further economic growth and development as well as helping to alleviate current problems. Development lending and these activities, however, are not well matched. Lending, even at concessional terms, requires repayment. Health and human resources programs, however, have little capacity for cost-recovery. That is, granting subsidized education and health services will not necessarily pay for itself by generating higher tax revenue elsewhere in the economy. More importantly, these public services are not likely to generate the foreign exchange necessary for repayment to external creditors.



In some developing countries, investment in human capital has helped form the basis for sustained economic development and growth. In most of Africa, however, standards of living are so low, poverty so pervasive, and population growth so rapid that the influx of external resources has generally served only to stem the rate of decline rather than to augment the rate of growth. In general, the poorest nations have the highest proportion of official debt to total debt, and they are, not surprisingly, those least able to generate the foreign exchange to amortize their debt. Figure 17 shows total external debt as a proportion of GDP and private debt as a proportion of GDP for IDA-eligible Sub-Saharan nations.

There are at least two debt crises in Africa. The first is a private debt liquidity crisis, concentrated in the oil-exporting nations of West Africa. The decline in oil prices has made it difficult for several of these nations to meet their debt-service payments, a similar situation to that of Mexico or other Latin American debtors. The second debt crisis is an official debt crisis. Most external debt of a majority of Sub-Saharan nations is official debt. Because little development assistance was invested in activities that generate a flow of foreign exchange earnings, many Sub-Saharan nations are unable to service even highly concessional loans.

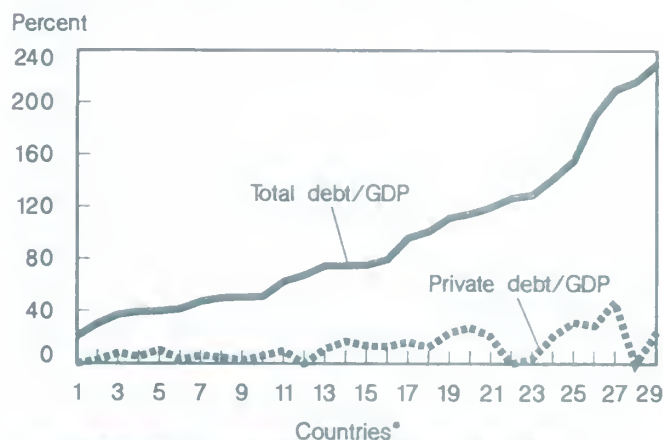
### *Towards a Resolution of the "Official" Debt Crisis*

The World Bank's *Financing Adjustment with Growth in Sub-Saharan Africa, 1986-1990* (April 1986) is one of the more visible publications on Sub-Saharan Africa's current financial troubles. It is a concerted plea for increased capital flows to Sub-Saharan Africa to raise the chances of success for the Bank's Structural Adjustment Programs and to achieve the Bank's goal of 3 to 4 percent real GDP growth for the region by 1990. The target of real growth is extremely optimistic and inflates Africa's "resource gap." One should recall that GDP levels attained in 1980 were reached in large part by foreign borrowing, inflows of official grants, and domestic deficit spending. The tightening of world capital markets and the slowdown in global economic growth prohibit the perpetuation of debt or deficit-financed

"growth" on a 1970's scale. Financial and fiscal austerity means declining real incomes in the short and medium term. Consequently, no growth or merely a mitigation of the rate of decline is a more plausible objective for 1990.

The Bank report implicitly acknowledges that further private lending to Sub-Saharan Africa is unlikely. Commercial banks with outstanding loans to Africa are trying to reduce their exposure and recover outstanding

Figure 17  
**Financial Ratios for Official Debtors**



\* The countries listed by number here are identified in the table below, along with corresponding ratios.

No./Country	Private Debt/ GDP	Total Debt/ GDP
percent		
1. Rwanda	0.00	20.90
2. Lesotho	2.87	30.80
3. Cameroon	8.07	37.60
4. Ethiopia	5.21	39.70
5. Sierra Leone	10.47	40.20
6. Burundi	2.99	41.90
7. Botswana	6.33	47.60
8. Burkina Faso	4.69	50.40
9. Swaziland	2.40	50.80
10. C.A.R.	6.15	51.40
11. Tanzania	10.05	63.00
12. Cape Verde	0.00	67.80
13. Guinea	11.46	75.00
14. Niger	17.28	75.10
15. Kenya	13.91	75.60
16. Sudan	13.35	79.90
17. Malawi	16.84	96.50
18. Senegal	12.87	101.50
19. Liberia	23.73	112.00
20. Madagascar	27.94	115.10
21. Zaire	20.93	120.00
22. Comoros	0.00	127.10
23. Mali	4.05	129.50
24. Togo	21.02	142.00
25. Gambia	31.86	155.80
26. Guinea-Bissau	29.15	190.20
27. Zambia	47.63	210.30
28. Sao Tome	0.00	216.60
29. Mauritania	24.11	230.00

loans. Unlike Brazil or Mexico, few major debtors in Sub-Saharan Africa have sufficient leverage over their creditors to gain more time or credit to resuscitate their foreign exchange flows. In most of Africa, "cut and run" has been the wisest policy for commercial lenders. Indeed, recent actions by money center banks to insure against the default of major Latin borrowers by increasing their reserves, indicates that the cut and run strategy may dominate all others in LDC lending.

The large number of reschedulings is also a negative signal to commercial banks and firms considering direct foreign investment. Neither the World Bank nor the IMF officially reschedules their loans. Neither admits to ever having suffered a default or a loss. The Bank and the Fund usually rank first in claims on a debtor's foreign exchange earnings, as do other government creditors. Politically important commercial imports generally rank second, followed by debt service by private borrowers and finally, repatriation of earnings to private external investment. In most countries, private investors will still be in the queue when the foreign exchange runs out. In addition, laws restricting foreign investors to less than majority interest in a concern, as well as other nationalistic legislation, have further inhibited the inflow of external investment.

The Bank report invokes the following categorical imperative: "No donor country should be a net recipient of resource flows from any African country undertaking credible economic reforms" (p.4). The Bank suggests that net resource flows to Africa could be increased "by additional concessional flows or debt rescheduling" (p.3) and, indeed, this is what has happened. In April 1987, the Paris Club—a consortium of official creditors to LDCs, including the United States, Japan, France, the United Kingdom, etc—declared a 10-year moratorium on debt service receipts from poor (IDA-eligible) Sub-Saharan nations. This is tantamount to forgiving the debt. Outright debt forgiveness could set a dangerous precedent for private lending and significantly reduce donors' leverage over recipient governments.

The moratorium, by virtually forgiving official debt service obligations, will lower debt-service ratios and greatly improve the

foreign exchange liquidity of the poorest (and generally most heavily burdened in terms of official debt) Sub-Saharan nations. This action is not one of altruism by the creditors, who realize the market value of the official debt is extremely low and they likely will not see much of a return on their loans. Indeed, Africa's severe problems have caused most donors to turn increasingly to grants rather than loans as a medium of resource transfer to Africa.

### *Debt Burdens*

Most debt problems arise from a lack of liquidity. When a country cannot meet its debt payments it goes into arrears. Creditors generally wish to avoid this situation as it undermines their credibility and could increase the probability of repudiation or default by the borrower. Rescheduling the debt is a solution to a short-term foreign exchange liquidity problem. Rescheduling involves lowering the size of the periodic debt payment (thereby improving the borrower's liquidity). In return, the creditor is compensated by increasing the value of the outstanding debt and the number of payments to maturity.

The ratio of a country's debt-service payments to its exports of goods and services (XGS)—generally called the debt-service ratio—is a standard measure of a country's external liquidity. A debt-service ratio below 15 percent is usually considered manageable. A ratio more than 25–30 percent is cause for alarm, and rescheduling is likely.

Rescheduling is probably a viable solution to the liquidity problems of richer oil-exporting nations—especially if oil prices firm during the next decade. For most other Sub-Saharan countries rescheduling is merely cosmetic, as prospects for economic growth and increases in export earnings are dim at best. Much of Sub-Saharan Africa is insolvent, meaning these nations lack assets and potential earning power to repay their creditors, who must decide how to distribute the debtors' assets. The Paris Club's moratorium may be interpreted as the official creditors agreeing to allow commercial lenders to step before them in line.

Because interest rates and maturities of official debt vary among countries, it is impossible to calculate precisely the amount



of debt-burden the Paris Club's moratorium will relieve. However, nations with the highest official Debt/XGS ratios likely will benefit the most. Table 7 ranks Sub-Saharan nations by the total debt/GDP ratios and indicates, for each, the number of reschedulings (public and private) to the end of 1986, the debt service-export ratio in 1986, the proportion of outstanding debt that is private debt, the outstanding private debt/GDP ratio, and per capita GDP. The table shows that debt rescheduling has helped most Sub-Saharan nations maintain relatively low debt service ratios. The number of

reschedulings tends to increase with the debt/GDP ratio.

If all official debt is covered under the Paris Club moratorium, the private debt/GDP ratio is a good indicator of the remaining debt burden (table 8). In terms of private debt/GDP, Cote d'Ivoire (84%) is the most highly leveraged, followed by the oil-exporting Congo (59%), Zambia (48%), and Benin (36%). Many of the most highly leveraged countries in terms of total debt/GDP have trivial private debt/GDP ratios: Sao Tome e Principe (0%), Mali (4%), and Senegal (13%) among others. In general, the lower a nation's per capita GDP, the lower its private debt/GDP ratio and, consequently, the greater the moratorium's effect.

Table 7- Debt Situation in Sub-Saharan Africa

Countries	Total Debt/GDP Reschedulings	Debt Service to Exports	Private Debt to GDP
		Percent	Percent
More than 200% +			
Mauritania	2		24
Sao Tome e Principe		39	0
Zambia	4	10	48
100 to 200%			
Guinea-Bissau		78	29
Gambia	1		32
Congo PR	2	20	59
Cote d'Ivoire	4	17	84
Togo	5	27	21
Mali		18	4
Comoros		9	0
Zaire	9	15	21
Madagascar	7	20	28
Liberia	5		24
Senegal	7		13
50 to 100%			
Malawi	3		17
Sudan	8	16	13
Kenya		26	14
Niger	5	27	17
Guinea	1		11
Benin			36
Cape Verde			0
Tanzania	1		10
Mauritius		11	19
Central Afr. Rep.	3		6
Swaziland		8	2
Burkina			5
0 to 50%			
Botswana		5	4
Lesotho		5	3
Rwanda		6	0
Nigeria		30	21
Zimbabwe		20	30
Burundi			3
Sierra Leone	4		10
Ethiopia		14	5
Cameroon		8	8
Gabon		12	23

SOURCE: IBRD, World Debt Tables.

### Development Assistance Flows

The Development Assistance Committee (DAC) of the OECD compiles an annual report of ODA flows and programs of its member nations. Selected data from DAC's 1986 Review are reproduced in the tables below to show recent trends in financial resource flows. Table 9 shows financial resource flows to all developing nations from all DAC members. Flows increased gradually during the 1980's, reaching a record \$29.4 billion in 1985—the most recent year for which data are available. The amount of bilateral assistance increased relative to multilateral assistance, and the grant proportion of bilateral assistance increased dramatically to \$17.8 billion in 1985. Capital subscriptions refer to capital flows to institutions such as the World Bank. Lower "other official flows" declined between 1984 and 1985. Much of the decline occurred because the net official export credit flow reversed; that is, the repayment of

Table 8- Sub-Saharan African borrowers, ranked by private external debt

Rank	Country	Private Debt \$ billion	Per cent	Total Debt \$ billion	Total Debt/ GDP	Private Debt/ GDP
1	Nigeria	14.96	82	18.35	26	21
2	Cote d'Ivoire	4.98	59	8.45	142	84
3	Zimbabwe	1.43	67	2.14	45	30
4	Zaire	1.11	17	6.36	120	20
5	Sudan	1.06	17	6.33	80	14
6	Zambia	1.02	23	4.48	210	48
7	Congo P.R.	.99	41	2.42	144	59
8	Kenya	.78	18	4.22	76	14
9	Gabon	.73	65	1.13	36	23
10	Madagascar	.63	24	2.59	115	28
11	Cameroon	.62	21	2.87	38	8
12	Tanzania	.58	16	3.60	63	10

SOURCE: OECD/DAC Annual Report 1986.

earlier disbursed credit exceeded the flow of new credit.

In contrast to the increased ODA and grants, private capital flows fell sharply in 1985, with a net drop of \$37 billion. Direct investment is about two-thirds of 1984, and the bilateral portfolio account is now negative—accounting for \$30 billion of the net shift. The falloff in private flows greatly exceeds the increase in official flows: net flows fell 45 percent between 1984 and 1985. These are the directions and magnitudes that alarmed the World Bank. What should be noted here, and what is generally neglected in studies of the debt crisis, is that the prime mover is the supply-side of the credit market (or lenders). Private lenders, including commercial banks, have retreated from

developing countries. Capital flight is taking place. This is the private movement of financial assets out of developing countries, the ultimate vote of no confidence in a government's ability to manage its external economic relations. Public lenders, for a variety of motives, have increased their flows but hardly enough to offset the private retreat. The net effect is that the supply of credit has shrunk; more of it is now rationed through political channels (ODA) and less of it through capital markets. The shrinking of the flow raised the likelihood of liquidity crises in LDCs in 1985. While data are not fully available for 1986, indications are that the net flow to LDCs was even smaller and the pressures on liquidity even greater. A byproduct of this process is an increasing number of reschedulings.

Table 9—Flow of financial resources to developing countries and multilateral agencies

		\$ million			
	1974-76	1982	1983	1984	1985
DAC:ODA	13145	27777	27590	28738	29428
Bilateral	9186	18445	18627	19690	21916
Grants	6062	13423	14224	15498	17840
Lending	3125	5022	4403	4192	4076
to Multilaterals	3959	9332	8963	9049	7512
Grants	1809	4137	4001	4176	4184
Capital subscription	2106	5192	4961	4889	3345
Concessional lending	43	4	4	-17	-17
Other official flow	3672	7414	4881	6196	3355
Official export credit	1943	2448	2114	1400	-704
Total official flow	16817	35191	32471	34934	32783
PVOs	1320	2317	2318	2587	2865
Private flows	19646	46557	35411	47322	10677
Direct investment	6325	10385	7792	11269	7690
Bilateral portfolio	7771	23665	17634	26284	-4723
Multilateral portfolio	1860	5178	4736	5530	6204
Private export credit	3690	7328	5249	4239	1506
Total Resource Flows	37783	84065	70200	84844	46325
USA	1974-76	1982	1983	1984	1985
ODA	4065	8202	8081	8711	9403
Bilateral	2778	4861	5563	6457	8182
Grants	1710	3791	4540	5644	7310
Lending	1068	1070	1023	813	872
to Multilaterals	1287	3341	2518	2254	1221
Grants	383	854	852	853	973
Capital subscription	904	2473	1650	1304	252
Concessional lending	0	14	16	-3	-4
Other official flow	858	1578	56	1023	178
Official export credit	703	494	721	-74	-898
Total official flow	4923	9780	8137	9734	9581
PVOs	776	1280	1320	1464	1513
Private flows	5835	19099	13580	17387	-9278
Direct investment	2729	5451	2340	4419	930
Bilateral portfolio	1687	12133	8532	11537	-10640
Multilateral portfolio	1033	1210	1067	448	314
Private export credit	386	305	1641	983	118
Total Resource Flows	11534	30159	23037	28585	1816
OPEC: ODA	8300	4400	3800	3700	2300

Source: OECD/DAC Annual Report 1986.

U.S. assistance has increased steadily to \$9.4 billion in 1985. Three-quarters of the sum is in the form of bilateral grants, an account that has increased rapidly in the 1980's. In contrast, transfers to multilateral agencies have fallen steadily. Declines in capital subscriptions account for most ODA contributions to this account. Subscriptions were \$252 million in 1985, to the great concern of the World Bank, which is the primary beneficiary of these funds.

The U.S. private account shows a dramatic reversal, declining \$26.6 billion, from \$17.4 billion to -\$9.3 billion in 1985. This drop accounts for two-thirds of the total DAC private decline of \$37 billion. The U.S. trade deficit and federal government deficit each requires large external financing. Many domestic sources of credit previously lent to LDCs have kept their money stateside. There has been a mammoth inflow of foreign capital into the United States, primarily from other OECD nations but also from LDCs. The two deficits, which grew larger in 1986, were sufficient to reduce the net outflow of funds from the United States to all LDCs to \$1.816 billion in 1985. The net flow in 1986 may well have been negative.

In the context of the U.S. weak trade and budgetary position, increases in overseas development assistance are remarkable. However, there is likely to be increasing pressure to cut ODA in future budgets. As an example of ODA funding from a donor with declining revenues, the ODA flow from OPEC



nations is shown on the bottom row of the table.

Total ODA to Africa has fared fairly well, increasing 12 percent between 1984 and 1985, versus a 2.4 percent increase in total LDC receipts of ODA (table 10). Africa's share of total ODA has risen gradually in the 1980's and stood at 18.8 percent in 1985. Although U.S. ODA has increased significantly in the 1980's, much of the increase is composed of food aid, which accounted for 44 percent of total U.S. ODA in 1985 (tables 11 and 12). Almost all of the large increase in U.S. ODA in 1985 went to the Sudan--by far the largest beneficiary of U.S. ODA.

### Conclusion

The debt service moratorium will relieve pressure significantly on the external accounts of poorer nations in the region, and help ease the process of structural adjustment and policy reform. Unfortunately, the lighter burden and improved policy environment are unlikely to result in dramatic economic growth in the region. In much of the Sahel--most notably Mauritania--nations now lack the productive capacity to feed themselves and, in the face of weak export commodity markets,

Table 10- Flow of development assistance to Sub-Saharan countries

By Recipient	1973	1981	1982	1983	1984	1985
\$ million						
Least Developed	2427	6255	6517	6369	6728	7795
Sudan	70	603	723	937	617	1116
Ethiopia	123	234	195	332	364	702
Tanzania	185	671	668	581	558	481
Kenya	177	429	474	392	411	434
Somalia	89	358	451	320	363	350
Mali	132	220	205	210	320	376
Senegal	146	379	278	315	368	291
Zaire	258	376	340	308	313	321
Zambia	84	221	310	312	239	325
Mozambique	0	137	203	206	259	297
Niger	131	185	251	171	162	301
Ghana	76	141	138	108	216	202
Burkina Faso	105	207	208	180	189	195
Mauritania	57	223	183	172	172	202
Uganda	41	130	130	134	164	182
Rwanda	72	147	147	146	165	179
Madagascar	97	224	236	175	151	180
Lower-Middle	471	717	753	708	796	672
Zimbabwe	2	203	211	204	298	234
Cameroon	113	190	207	126	186	158
Upper-Middle	413	672	470	780	437	461
Total	3310	7644	7740	7556	7961	8928

Source: OECD/DAC Annual Report 1986.

are unlikely to earn the foreign exchange for commercial food imports.

Consequently, food aid needs will remain high. The weak world petroleum market, along with policy reforms to lower overvalued currencies and rationalize the internal distribution of foreign exchange, are likely to mute overall demand and food import demand in the oilexporting nations of West Africa. Their longrun economic survival lies in turning away from importing for consumption toward importing materials and capital goods that

Table 11- Flow of development assistance to Sub-Saharan countries

By Source	1973	1981	1982	1983	1984	1985
\$ million						
DAC Bilateral	2145	4462	4527	4597	5029	5593
Australia	4	36	52	50	43	39
Canada	176	232	268	222	321	338
EC	1401	2789	2751	2719	3041	3088
France ex DOM/TOM	434	781	836	837	975	921
U.S.	272	777	679	795	857	1276
Multilateral	889	2121	2056	2054	2430	2807
IBRD	0	22	12	8	9	6
IDA	200	195	651	592	757	851
AfDC	0	87	106	141	105	204
EDF	390	709	571	538	678	648
UNDP	141	270	234	193	195	221
WFP	74	192	176	218	280	349
IFAD	0	13	22	40	43	76
OPEC/ Arab	57	748	937	810	502	513
Total	3091	7331	7520	7461	7961	8913

Source: OECD/DAC Annual Report 1986.

Table 12- Food aid to Sub-Saharan Africa

	1981	1982	1983	1984	1985
\$ Million					
Total	956	746	780	1178	1374
Bilateral DAC	630	465	499	707	907
U.S.	426	200	213	372	558
EC	108	109	114	163	192
Australia	28	36	42	43	17
Canada	27	32	36	68	51
Multilateral	326	281	281	471	467
EC	129	101	57	191	114
WFP	197	180	224	280	353
Percent					
Food aid as % of DA	12.5	9.6	10.3	14.8	15.4
DAC Bilateral	14.1	10.3	10.9	14.1	16.2
Australia	77.8	69.2	84.0	100.0	43.6
Canada	11.6	11.9	16.2	21.2	15.1
EC	6.8	6.3	5.3	9.5	8.2
U.S.	54.8	29.5	26.8	43.4	43.7

Source: OECD/DAC Annual Report 1986.

complement their resource base to enhance productive capacity and domestic distribution systems. [David W. Skully]

## FOOD AID AVAILABILITY

With growing financial difficulties, and a decline in export earnings and external financial assistance, food aid remains an important instrument to help Sub-Saharan Africa, especially countries here with a high import dependency. Although economists have argued that because of its inflexibility, food is not a substitute for financial aid, the reality is that donor surpluses are growing and there is a greater chance to get political support to increase food aid than financial assistance.

With large annual production variations and free market pricing policies, the dilemma is how to prevent food aid from depressing prices. The decline in producer prices because of production recovery interferes with policy efforts aimed at food production development (see production section). In most cases, once food aid has begun, it is difficult to significantly change or halt it. Mauritania and Somalia are good examples. Here, careful planning, based on the country's policy and market structure, is needed to use food aid for development purposes. Policies such as trilateral transactions, which involve purchasing food from a surplus country and donating it to another country, would encourage trade and food production. In Africa, the nutritional level remains poor and food distribution channels weak. Food aid in exchange for work could be used effectively in those areas. Food aid to replace specific commercial imports such as wheat is another option. Demand for wheat has grown rapidly in recent years, and the region lacks the resources to increase wheat output to meet demand. The mix of food aid could also be altered. For example, dairy products could replace grains in the recovery years.

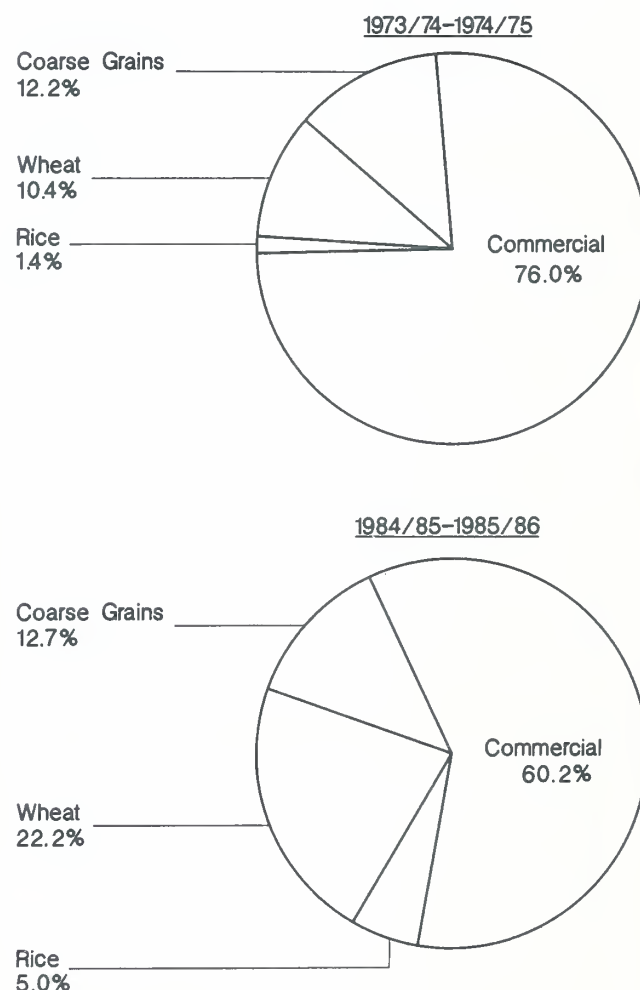
### *Trends in Food Aid*

During the last 2 years food aid shipments (including wheat, rice, coarse grains, and the grain component of blended foods) to Sub-Saharan Africa have declined with production recovery. Food aid peaked at 4.8 million tons or 40 percent of total grain imports in 1984/85 (figure 18). Food aid and

total grain imports fell in 1985/86 to 3.5 and 9 million tons, respectively, with not much change in their relative shares. Chad, Mozambique, and Somalia received the largest share of grain imports as food aid, while Senegal and Zaire were the least dependent on food aid. Food aid imports to the region were expected to decline again in 1986/87, but estimates of actual shipments vary from 2 to 3 million tons. While the level of emergency aid was much lower, other food aid programs, such as P.L. 480 Title I, have continued.

Since the mid-1970's wheat has dominated grain imports. Wheat's share of grain food aid has remained in the 50-to-60-percent range. The share of coarse grains tends to go up as emergency food aid increases, while rice falls during droughts (figure 19). In 1984/85, food aid shipments

Figure 18  
**Food Aid Share of Total Imports**





included 2.6 million tons of wheat, 500,000 tons of rice, and 1.6 million tons of coarse grains. While no breakdown by grain is available for 1985/86 and 1986/87, most of the decline is likely to be in coarse grains.

Sub-Saharan Africa's share of total world food aid increased rapidly from 15 percent in the late 1970's to 38 percent in 1984/85, (figure 20). The region's share has fallen to less than one-third during the last 2 years. The large allocation of food aid to the region was in response to emergency situations, drought, or warfare. Before 1977, only Ethiopia, Kenya, and Sudan received P.L. 480 Title I food aid. Sudan's food aid receipts began rising in 1977, with about 90 percent targeted for development purposes. In Zambia and Senegal, the P.L. 480 Title I program

began in 1977 and 1980, respectively, and supplied from 30 to 100 percent of total food aid.

For 1986-87, food aid requirements are highest for Mozambique, Ethiopia, and Sudan. In Sudan, total grain supplies are above recent consumption levels. Since maintaining consumption at recent levels is used by both FAO and USDA as a basis for food aid needs estimates, the large growth in sorghum production reduced food aid needs in Sudan (19). If sorghum is separated as a source of foreign exchange earnings (as FAO has done), food aid requirements are estimated at 365,000 tons, mostly wheat. Donors' food aid pledges exceed 500,000 tons for 1986/87. The needs are highest in southern Sudan where war has disrupted food supplies.

Figure 19  
**Food Aid by Commodity**

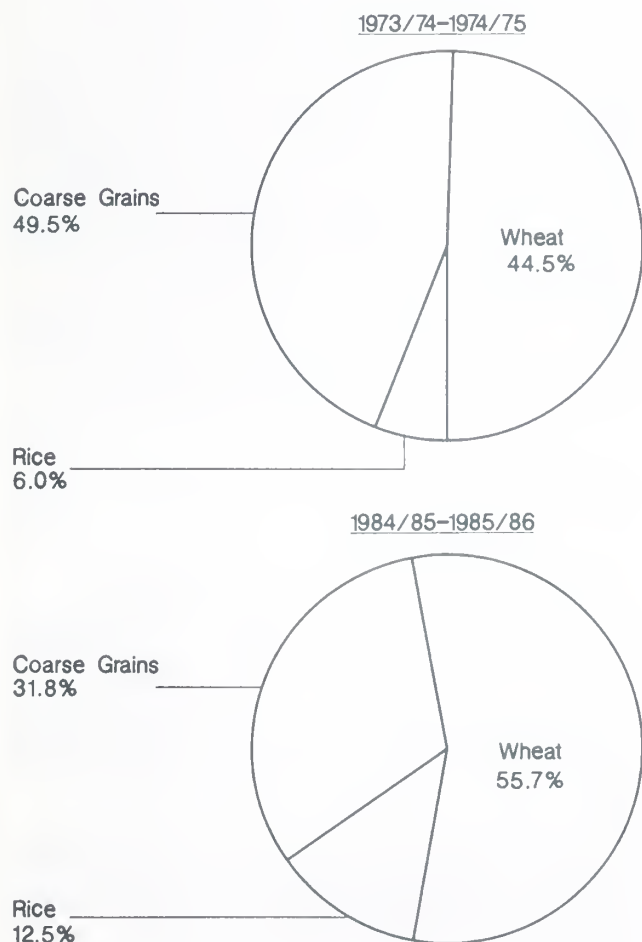
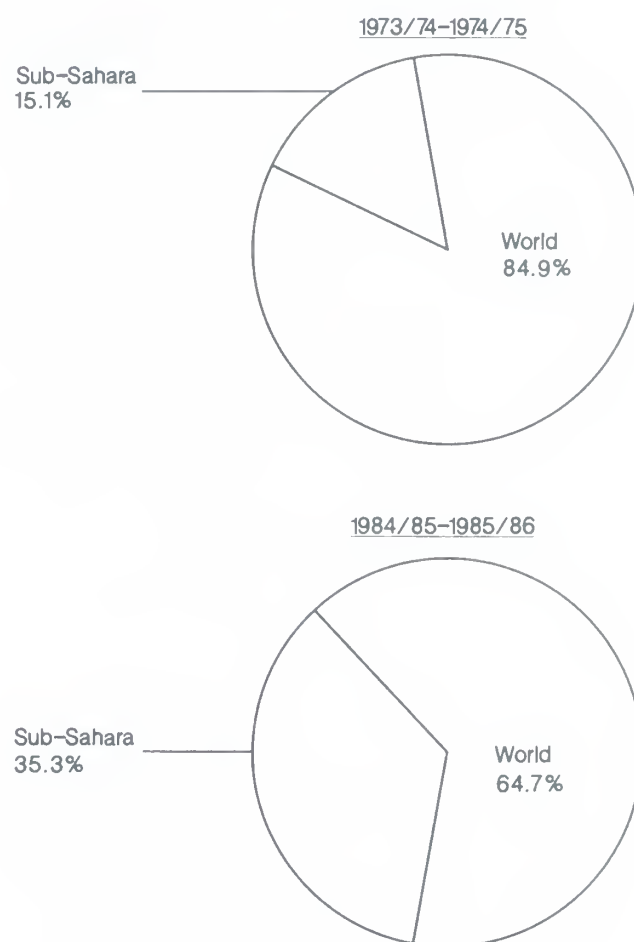


Figure 20  
**Sub-Sahara's Share of World Food Aid**



## *Donor Positions*

FAO estimates that shipments of cereal aid worldwide were 10.3 million tons in the July-June 1985/86 trade year, 15 percent lower than the 1984/85 peak of almost 12.5 million tons. This reflects, in part, lower emergency needs in Africa. Shipments to low-income, food-deficit countries, many in the Sub-Saharan, were estimated at 3.5 million tons, or nearly 30 percent of the total. Pledges for 1986/87, as of early-April, totaled about 3 million tons. Among bilateral donors, the United States has pledged 1.6 million tons, or slightly more than half the total. The EC follows with 680,000 tons, about 20 percent. Canada has pledged 175,000 tons or about 5 percent. The World Food Program (WFP), the multilateral food aid agency established by the United Nations and the FAO, has pledged nearly 300,000 tons, about 10 percent of the total.

## *Donors and Policy Reforms*

Food aid has changed recently as donors have revised their policies. Some changes in U.S. food aid programs, authorized under the Food Security Act of 1985, were meant to encourage policy reforms and channel resources through the recipients' private sectors. Section 108 of P.L. 480 states that loans are to help finance productive, private investment, private facilities for increasing consumption of U.S. agricultural commodities and products, and private enterprise. However, there may be a conflict between the goals of encouraging self-help measures and the goal to increase imports of U.S. agricultural products. Furthermore, the credit to local financial institutions is to be invested in enterprises that promise a secure rate of return. Hence, those enterprises already relatively well-developed and proven profitable may benefit more under the program than less-developed enterprises.

The new Food for Progress program is to use U.S. agricultural commodities more effectively to support countries committed to introducing or expanding free enterprise in their agricultural economies. Under the program, at least 75,000 tons of commodities are to be provided to help implement agricultural policy reforms. In 1986, Madagascar and Guinea received rice under the program.

In late 1986, the EC passed a regulation defining food aid objectives and attempting to improve the management and effectiveness of EC food aid. Objectives are to promote the recipient country's food security and economic and social development, to improve nutrition, and to assist in food emergencies. To achieve these goals, food aid is to be fully integrated into the EC's overall development policies. Allocation criteria include the recipient countries' "basic food needs, per capita income and the existence of particularly impoverished groups, the balance of payments situation, and the economic and social impact and financial cost [of the aid]." Conditions are defined under which food aid commodities may be obtained, not only from EC stocks, but from a surplus region of the recipient country or from a third country for supply within the recipient country. Provision of food aid may be conditional upon implementation of development projects or other actions.

The WFP is the third largest donor of food aid to Sub-Saharan Africa. In 1986, it used more than 40 percent of the food it distributed to help boost agricultural production, 30 percent for emergency purposes, and 20 percent in price stabilization and reserve projects. The remaining 10 percent was used for human resource and infrastructure development programs. Recently, the WFP has scaled back its emergency feeding projects and increase its resources devoted to stimulating agricultural production. Emergency feeding programs were reduced from about \$120 million in 1985 to about \$80 million in 1986, while projects to boost production doubled to nearly \$115 million.

## *Trilateral Transactions and Local Purchases*

An increasing amount of food aid to Sub-Saharan Africa is through trilateral transactions and local purchases. Ten percent of global food aid pledges to Sub-Saharan countries are in these forms. Trilateral transactions are those in which a donor obtains food aid commodities for the recipient from a third country. As of early April, almost 240,000 tons of cereal aid involving trilateral transactions have been reported to the FAO. Zimbabwe has been a frequent source of the commodities and Mozambique a large recipient.



In some cases, surpluses exist within a country that also has food needs among some regions or population groups. As of early April, the EC, Norway, and Switzerland reported purchases of more than 80,000 tons of surpluses for distribution as food aid within the same country. Chad, Malawi, Mali, Senegal, and Zimbabwe have received such aid.

Trilateral transactions and local purchases stimulate internal and intraregional trade. While such transactions enhance sales (and perhaps exports) and hence earnings for the producers (and exporters), they also provide the right commodities in a timely manner. They provide incentives to improve infrastructure and institutions to transport commodities from surplus to deficit regions. At a time when local surpluses threaten to depress prices and thus reduce production incentives, trilateral transactions and local purchases help maintain producer price incentives.

### *Food Aid Impacts*

What has been the impact of such a large influx of food aid? The most obvious short-term impact has been to avert widespread loss of lives. Food aid during the drought years contributed significantly to increasing food availabilities. During the 1972-74 drought in the Sahel, food aid provided the equivalent of 14 percent of food consumption in Mali, 18 percent in Niger, and 8 percent in Senegal. During the drought years of 1979 to 1981 in Southern Africa, food aid contributed to 11 percent of food consumption in Lesotho, 16 percent in Mozambique, and 13 percent in Zambia. Food aid also added 9 and 15 percent, respectively, to food availabilities in Sudan and Ethiopia in 1982-84. During this period, food aid freed foreign currency in these nations to be used for increasing commercial food imports. Food aid could displace commercial imports, as probably is the case of Sudan, and allow imports of other essential commodities to restore economic growth. In addition, food aid reduced political pressures on local governments during severe food shortages.

Because of the emergency nature of most food aid, the overall long-term impact has been limited. Use of food aid for development in the region has a brief history (20). During the 1950's and 1960's, as countries gained

their independence, economic aid was initiated by donors for a variety of reasons, including political interest. It was after the prolonged drought in the Sahel in 1974, that food aid first became an established part of overall aid to Africa. Since then, in a number of countries, Sudan, Somalia, Zaire, Liberia, Mali, Chad, Senegal, Mauritania, and Kenya, food aid has increased steadily. Donor efforts to reward politically friendly countries and to supplement declining food supplies contributed to these trends. Among countries with established food aid flows, Sudan has had the largest share, followed by Zaire, Somalia, and Kenya. Food aid allocation to other countries of the region, such as Mozambique and Ethiopia, was a response to emergency needs combined with very low nutritional levels.

The potential disincentives of food aid for domestic production, especially in countries where food aid has a long history, are the major concern. Large quantities of food aid could depress producer prices, lower consumption of local foods, and compete for limited distribution facilities. So far, the direct impact of food aid on local producer prices appears to be limited in most countries. Until recently, producer prices for most food crops were set by governments at a lower level than their corresponding import parity prices in order to benefit urban consumers. However, pricing policies in a number of countries have shifted toward increasing prices to stimulate production. Although, price increases are expected to have a positive impact on production, in Africa nonprice factors such as weather, scarcity of inputs, credit, and marketing facilities play an equal role in establishing production levels.

Substitution of imports for local food is common. In recent years, wheat, the major food aid commodity, has become increasingly important in the African diet. More than 75 percent of wheat is imported, and per capita consumption has doubled in the last 10 years. With total consumption stagnant, this has meant a corresponding decrease in the share of locally produced commodities. Finally, food aid competes with local production for limited marketing facilities. While the consequences of such competition have not been studied, it is expected that distribution of food aid has put a significant burden on marketing activities.

The future impact of recent food trends should be analyzed carefully. Considering recent grain surpluses among OECD countries, available food for disposal may increase significantly in the future. In Africa, absorbing significantly larger quantities of food aid would be difficult, especially over the short term because transportation, storage, and management capabilities are limited in most Sub-Saharan countries.

In the long term, serious problems could arise from food aid's disincentive effect on domestic production and its tendency to shift consumption away from locally produced commodities (such as millet, sorghum, and corn) to wheat. Currently, attempts by donor countries to tie food aid to policy reforms could increase employment and consumption, and could support long-term agricultural development. In most of Africa, the potential for increasing food production exists. Currently, most crop yields are 20 to 70 percent lower than the international average. The problem stems from deficient resources, lack of proper technologies, inadequate incentives, and lack of support systems. Food aid alone will not reverse Africa's declining per capita food production unless it is combined with other types of aid aimed at improving the institutional support necessary to evoke large supply responses. [Shahla Shapouri and Mark Smith]

## REFERENCES

Adedeji, Adebato and Timothy M. Shaw. "Economic Crisis in Africa: African Perspectives on Development Problems and Potentials," 1985. (16)

Bond, Marian E. "Agricultural Responses to Prices in Sub-Saharan African Countries," IMF Staff Papers, December 1983. (4)

Food and Agricultural Organization of the United Nations (FAO). 1981. "Agriculture: Toward 2000. Economic and Social Development," series no. 23, Rome. (2)

FAO. *Commodity Review and Outlook*, 1985-86. (11)

Huddleston, Barbara. "Closing the Cereals Gap with Trade and Food Aid," International Food Policy Research Institute (IFPRI), January 1984, Washington, D.C. (3)

International Monetary Fund (IMF). *World Economic Outlook*, A survey by the staff of the IMF, April 1986. (10), (12), (14)

IMF Staff Papers. "Effects of Increased Market Access on Exports of Developing Countries," December 1984. (15)

Organization for Economic Cooperation and Development (OECD), Development Assistance Committee (DAC). *Annual Report*, 1986. (18)

Organization of African Unity. *The Lagos Plan of Action for the Implementation of the Monrovia Strategy for the Economic Development of Africa*. Lagos, Nigeria, 1980. (7)

Shapouri, Shahla, A.J. Dommen, Stacey Rosen. "Food Aid and African Food Crisis," FAER-221, 1986. (1) (5) (20)

Shapouri, Shahla and Nancy McKaig. "Response to Exchange Rate Adjustment in Developing Countries," presented at 13th annual Eastern Economic Association, March 1987. (9)

Shapouri, Shahla and Stacey Rosen. "Effect of Fiscal Austerity on African Food Imports," FAER-230, May 1987, Washington, D.C. (13)

U.S. Department of Agriculture, Economic Research Service. "Government Intervention in Agriculture," FAER-229, April 1987. (8)

U.S. Department of Agriculture. "World Food Needs and Availabilities, 1986/87." (19)

World Bank. *Accelerated Development in Sub-Saharan Africa: Agenda for Action*. Washington, D.C., 1981. (6)

World Bank. "Financing Adjustments with Growth in Sub-Saharan Africa, 1986-1990," February 1986. (17)



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## Supply and use of corn in Sub-Saharan Africa

Year	Area	Production	Yield	Imports	Exports	Availability	Per capita	Feed	Ending stocks	U.S. export (Jan./Dec.)
	1,000 ha.	1,000 tons	Tons/ha.	-----	1,000 tons	-----	Kgs.	-----	1,000 tons	-----
<b>South Africa (May/April)</b>										
1980	4,322	10,794	2.50	0	3,444	6,757	235.2	3,280	1,952	3
1981	4,339	14,645	3.38	0	4,955	7,097	241.0	3,440	4,545	0
1982	4,278	8,355	1.95	130	4,034	7,663	253.9	3,450	1,333	0
1983	4,065	4,083	1.00	2,380	238	7,525	243.2	3,790	42	868
1984	3,953	4,405	1.11	2,004	9	6,145	195.0	3,060	264	2,529
1985	3,887	8,136	2.09	193	543	6,182	188.8	3,030	1,865	246
1986	4,044	8,078	2.00	7	2,650	6,100	183.5	2,990	1,200	0
<b>Nigeria (January/December)*</b>										
1980	1,900	1,720	0.91	168	0	1,803	20.0	300	160	162
1981	1,940	1,750	0.90	293	0	1,993	21.4	400	180	282
1982	1,970	1,785	0.91	347	0	2,112	22.0	400	165	289
1983	1,890	1,660	0.88	50	0	1,975	20.2	320	25	40
1984	1,975	1,800	0.91	103	0	1,773	17.7	460	15	87
1985	2,000	2,000	1.00	97	0	1,812	17.6	600	100	94
1986	2,200	2,200	1.00	25	0	1,925	18.3	650	200	0
<b>Kenya (July/June)</b>										
1980	1,488	1,750	1.18	400	0	2,020	122.9	30	180	74
1981	1,690	2,200	1.30	295	0	2,155	125.9	30	320	111
1982	1,720	2,340	1.36	0	77	2,166	121.4	30	617	0
1983	1,720	2,070	1.20	0	107	2,280	122.7	50	300	0
1984	1,600	1,700	1.06	621	0	2,158	111.4	50	463	51
1985	1,790	2,700	1.51	0	150	2,363	117.0	50	750	201
1986	1,795	2,730	1.52	0	500	2,384	113.3	75	590	0
<b>Mozambique (May/April)</b>										
1980	650	300	0.46	140	0	440	36.3	-	-	20
1981	650	350	0.54	150	0	500	40.4	-	-	10
1982	660	325	0.49	150	0	475	37.4	-	-	0
1983	450	200	0.44	221	0	421	32.3	-	-	23
1984	475	225	0.47	213	0	438	33.1	-	-	39
1985	455	265	0.53	207	0	472	34.6	-	-	112
1986	450	250	0.50	250	0	500	35.7	-	-	36
<b>Zimbabwe (April/March)</b>										
1980	1,146	1,760	1.54	95	86	1,611	219.5	300	158	15
1981	1,438	2,767	1.92	0	305	1,419	186.2	350	1,201	0
1982	1,407	1,786	1.27	0	492	1,460	186.0	350	1,035	0
1983	1,322	884	0.67	0	252	1,544	189.7	300	123	0
1984	1,356	1,400	1.03	269	4	1,322	156.2	310	466	43
1985	1,429	2,950	2.06	0	283	1,692	195.0	325	1,441	0
1986	1,256	2,545	2.03	0	650	1,536	171.0	300	1,800	0
<b>Total Sub-Saharan Africa</b>										
1980	17,796	24,481	1.38	2,135	3,517	22,163	55.6	4,207	2,710	752
1981	18,473	30,894	1.67	2,067	5,198	23,980	58.4	4,532	6,493	714
1982	18,703	24,079	1.29	1,503	4,418	24,444	57.8	4,564	3,214	360
1983	17,990	18,473	1.03	2,574	920	22,658	52.1	4,770	693	1,026
1984	18,658	19,904	1.07	4,925	176	23,946	53.6	4,176	1,400	2,842
1985	19,105	26,984	1.41	2,013	982	25,222	54.9	4,229	4,193	718
1986	19,248	27,015	1.40	821	3,650	24,500	51.8	4,268	3,879	71

- = not available.

\* Availability is calculated using production from the previous year because of late harvests.



## Supply and use of sorghum in Sub-Saharan Africa (January/December)

Year	Area	Production	Yield	Imports	Exports	Availability	Per capita	Feed	Ending Stocks	U.S. Exports
	1,000 ha.	1,000 tons	Tons/ha.	-----	1,000 tons	-----	Kgs.	-----	1,000 tons	-----
<b>Nigeria*</b>										
1980	6,000	3,800	0.63	1	0	3,786	42.1	30	50	1
1981	6,000	3,700	0.62	1	0	3,751	40.4	30	100	1
1982	6,025	4,134	0.69	0	0	3,750	39.1	30	50	0
1983	5,900	2,660	0.45	7	0	3,941	40.3	20	250	7
1984	6,000	3,690	0.62	12	0	2,897	29.0	30	25	12
1985	6,200	3,500	0.56	75	0	3,590	34.9	30	200	75
1986	6,200	3,600	0.58	0	0	3,500	33.2	40	200	0
<b>Burkina*</b>										
1980	957	547	0.57	20	0	673	109.6	-	-	9
1981	1,084	659	0.61	13	0	560	89.4	-	-	13
1982	1,048	609	0.58	14	0	673	104.9	-	-	0
1983	1,075	611	0.57	12	0	621	94.5	-	-	0
1984	1,080	598	0.55	19	0	630	93.6	-	-	15
1985	1,200	797	0.66	12	0	610	88.3	-	-	7
1986	1,450	1,027	0.71	0	0	797	112.3	-	-	0
<b>Sudan*</b>										
1980	2,922	2,068	0.71	0	338	1,432	75.2	-	100	0
1981	3,906	3,277	0.84	0	256	1,812	92.1	-	100	0
1982	3,639	1,938	0.53	0	388	2,489	122.4	-	500	0
1983	3,688	1,806	0.49	0	280	1,958	93.3	-	200	0
1984	3,427	1,110	0.32	21	100	1,927	89.1	-	0	21
1985	5,625	3,600	0.64	640	0	1,650	71.8	-	100	440
1986	4,800	3,400	0.71	50	205	2,250	98.1	-	1,295	0
<b>Total Sub-Saharan Africa</b>										
1980	14,786	10,934	0.70	110	570	10,317	25.9	394	537	50
1981	15,847	11,837	0.72	137	256	11,705	28.5	539	550	53
1982	15,649	10,715	0.67	122	428	10,279	24.3	341	680	45
1983	15,901	8,993	0.56	192	290	9,071	20.9	292	504	59
1984	15,583	8,953	0.55	183	120	9,419	21.1	482	101	262
1985	17,791	12,399	0.67	757	163	12,654	27.5	426	440	687
1986	16,770	12,621	0.74	116	420	10,900	23.0	460	1,857	5

- = not available.

\* Availability is calculated using production from the previous year because of late harvests.

## Supply and use of wheat in Sub-Saharan Africa

Year	Area	Production	Yield	Imports	Exports	Availability	Per capita	Feed	Ending Stocks	U.S. export (Jan./Dec.)
	1,000 ha.	1,000 tons	Tons/ha.	-----	1,000 tons	-----	Kgs.	-----	1,000 tons	-----
Sudan (January/December)										
1980	192	233	1.21	373.1	0	606	31.8	-	60	359
1981	184	218	1.18	394.6	0	553	28.1	-	120	377
1982	156	163	1.04	523.8	0	747	36.7	-	60	401
1983	130	141	1.08	440.5	0	582	27.7	-	60	314
1984	147	172	1.17	505.0	0	737	34.1	-	0	334
1985	50	79	1.58	1,027.4	0	1,056	46.0	-	50	504
1986	108	199	1.84	700.0	0	899	39.2	-	50	416
Nigeria (January/December)*										
1980	10	24	2.40	1,176	0	1,204	13.4	10	102	1,005
1981	10	25	2.50	1,517	0	1,536	16.5	10	107	1,205
1982	12	30	2.50	1,492	0	1,552	16.2	10	72	1,424
1983	14	35	2.50	1,379	0	1,369	14.0	15	112	1,317
1984	16	42	2.63	1,693	0	1,690	16.9	24	150	1,617
1985	18	50	2.78	1,723	0	1,815	17.7	25	100	1,474
1986	22	40	1.82	1,154	0	1,284	12.2	24	40	937
Ethiopia (January/December)*										
1980	536	614	1.15	396	0	893	23.1	0	60	69
1981	685	706	1.03	200	0	834	21.3	0	40	39
1982	714	917	1.28	295	0	1,001	24.9	0	40	0
1983	640	700	1.09	302	0	1,129	27.3	0	130	0
1984	625	650	1.04	498	0	1,308	31.0	0	20	25
1985	625	650	1.04	933	0	1,445	34.2	0	158	129
1986	630	750	1.19	750	0	1,258	28.7	0	300	73
South Africa (October/September)										
1980	1,623	1,470	0.91	255	13	1,993	69.4	95	320	1
1981	1,787	2,340	1.31	131	6	1,998	67.9	100	787	294
1982	1,974	2,420	1.23	59	157	2,045	67.7	135	1,064	103
1983	1,809	1,809	1.00	282	104	2,384	77.1	481	667	2
1984	1,919	2,224	1.16	118	110	2,179	68.7	159	720	33
1985	1,951	1,680	0.86	306	78	2,200	67.8	106	420	17
1986	1,925	2,285	1.19	50	102	2,177	65.5	41	484	168
Total Sub-Saharan Africa										
1980	2,657	2,851	1.34	4,236	13	7,362	18.5	198	766	2,005
1981	2,963	3,843	1.28	4,975	6	8,197	20.0	210	1,381	2,425
1982	3,175	4,118	1.41	4,796	157	8,593	20.3	243	1,545	2,272
1983	2,877	3,164	1.27	4,512	104	7,889	18.1	590	1,228	1,995
1984	2,973	3,409	1.12	5,848	110	9,271	20.7	278	1,105	2,283
1985	2,976	3,033	1.32	6,629	78	9,648	21.0	247	1,041	2,619
1986	3,008	3,903	1.49	5,548	102	9,228	19.5	193	1,112	2,134

- = not available.

\* Availability is calculated using production from the previous year because of late harvests.



## Supply and use of rice in Sub-Saharan Africa (January/December)

Year	Area	Milled Production	Yield	Imports	Exports	Availability	Per capita	Feed	Ending Stocks	U.S. Exports
	1,000 ha.	1,000 tons	Tons/ ha.	-----	1,000 tons	-----	Kgs.	-----	1,000 tons	-----
<b>Nigeria*</b>										
1980	550	725	1.98	394	0	1,060	11.8	0	150	190
1981	600	825	2.07	686	0	1,361	14.6	0	200	402
1982	650	918	2.12	666	0	1,491	15.5	0	200	343
1983	630	851	2.03	711	0	1,579	16.2	0	250	124
1984	670	900	2.02	384	0	1,325	13.3	0	160	22
1985	700	732	1.57	345	0	1,395	13.6	0	10	0
1986	720	798	1.67	200	0	882	8.4	0	60	0
<b>Cote d'Ivoire*</b>										
1980	360	230	0.97	168	0	433	52.5	0	0	14
1981	340	256	1.15	335	0	565	65.7	0	0	6
1982	350	276	1.20	357	0	613	68.5	0	0	29
1983	380	237	0.95	383	0	609	65.3	0	50	3
1984	411	338	1.25	321	0	457	47.2	0	150	7
1985	440	381	1.32	162	0	578	57.2	0	72	2
1986	445	302	1.03	351	0	704	67.0	0	100	3
<b>Senegal*</b>										
1980	67	43	0.97	406	0	421	73.0	0	100	19
1981	69	80	1.74	322	0	390	65.6	0	75	19
1982	68	63	1.40	359	0	414	67.4	0	100	25
1983	52	72	2.08	339	0	452	71.3	0	50	11
1984	66	91	2.06	372	0	453	69.3	0	40	3
1985	78	98	1.88	350	0	443	65.5	0	38	125
1986	71	95	2.01	335	0	427	61.2	0	44	47
<b>Madagascar</b>										
1980	1,199	1,350	1.76	191	0	1,541	178.3	0	0	0
1981	1,185	1,287	1.70	357	0	1,644	185.0	0	0	18
1982	1,188	1,347	1.77	185	0	1,532	167.7	0	0	38
1983	1,189	1,374	1.81	96	0	1,470	156.4	0	0	25
1984	1,163	1,364	1.83	111	0	1,475	152.6	0	0	34
1985	1,184	1,394	1.84	105	0	1,499	150.8	0	0	44
1986	1,180	1,427	1.89	154	0	1,581	154.3	0	0	45
<b>Total Sub-Saharan Africa</b>										
1980	4,367	3,950	0.90	2,398	11	6,409	16.1	1	313	535
1981	4,469	4,147	0.93	2,570	8	6,672	16.3	2	356	735
1982	4,514	4,275	0.95	3,043	3	7,261	17.2	1	410	813
1983	4,501	4,181	0.93	2,832	1	6,968	16.0	1	455	511
1984	4,620	4,346	0.94	2,816	0	7,127	15.9	1	493	428
1985	4,831	4,455	0.92	2,682	0	7,404	16.1	0	225	514
1986	4,933	4,594	0.93	2,866	0	7,376	15.6	0	310	431

\* Availability is calculated using production from the previous year because of late harvests.

U.S. agricultural exports to Sub-Saharan Africa, by value and quantity, for selected items, 1985 and 1986

Country	Total		Wheat and wheat flour		Corn		Rice		Inedible fallow		Soybean oil	
	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986
\$ thousand												
Angola	11,396	20,593	42	0	55	0	124	10	1,300	557	401	246
Benin	9,909	8,333	553	1,723	0	0	137	270	0	0	1,753	419
Botswana	7,819	3,907	0	0	231	0	0	0	0	0	2,053	0
Burkina	21,989	6,696	0	0	0	0	4,080	13	0	0	4,209	925
Burundi	2,207	30	0	0	0	0	0	0	0	0	688	0
Cameroon	14,588	5,058	0	1	0	0	2,602	54	0	585	2,084	0
CAR	462	763	0	0	0	0	0	10	0	0	122	0
Chad	16,752	1,886	398	0	369	0	1,323	0	0	0	5,879	198
Congo, P.R.	809	508	0	0	0	0	132	134	0	0	0	21
Djibouti	32	1,376	0	22	0	26	0	667	0	0	0	0
Ethiopia	162,926	70,958	19,429	10,118	170	49	171	81	0	0	23,692	5,648
Gabon	838	510	0	0	0	0	347	190	0	0	0	0
Gambia	3,256	3,173	26	0	0	0	2,106	2,224	0	0	402	223
Ghana	29,816	20,330	5,967	4,519	3	385	5,685	1,125	0	0	2,962	483
Guinea	11,288	14,451	805	0	0	0	7,973	13,840	0	0	155	0
Ivory Coast	9,782	3,837	67	5	13	115	852	1,417	0	0	401	758
Kenya	41,232	14,717	10,916	7,401	23,701	0	19	4,163	380	330	1,036	36
Lesotho	5,415	4,778	409	353	0	0	0	0	0	0	1,381	499
Liberia	26,503	23,594	2,005	2,350	0	99	20,442	18,074	0	0	22	27
Madagascar	16,180	10,572	0	600	0	0	11,688	7,796	383	599	3,395	497
Malawi	734	322	0	149	0	0	0	0	513	0	0	0
Mali	21,631	6,731	520	76	4,528	2,175	11,419	2,075	0	0	123	121
Mauritania	21,551	6,039	3,368	52	0	0	112	0	0	0	768	126
Mauritius	4,476	4,547	0	307	0	0	0	61	0	0	2,611	3,171
Mozambique	35,809	14,410	4,925	6,506	14,220	3,567	9,601	2,900	0	0	18	470
Niger	12,306	1,101	0	0	5	0	0	0	0	0	0	0
Nigeria	313,151	147,574	225,920	109,796	13,023	0	56	50	18,791	6,690	339	919
Rwanda	3,581	2,977	119	403	0	0	248	0	0	0	1,104	684
Senegal	26,564	21,040	114	0	15	0	14,077	10,105	266	4,449	1,909	361
Sierra Leone	6,639	9,039	2,005	1,933	0	0	2,144	5,702	0	0	523	292
Somalia	39,000	35,183	10,130	6,887	3,799	953	4,998	5,047	0	0	13,228	9,178
South Africa	108,389	69,534	1,714	18,348	30,282	0	25,089	18,936	7,460	5,458	3,111	570
Sudan	170,784	59,616	77,852	50,212	16	0	57	0	4,029	2,620	13,164	0
Tanzania	16,463	5,125	50	291	0	0	149	29	0	0	5,888	241
Togo	8,723	4,578	1,977	1,002	58	0	327	196	0	0	1,803	594
Uganda	678	424	0	0	0	0	0	0	0	0	191	0
Zaire	24,668	27,458	16,121	20,367	0	150	0	0	0	0	0	0
Zambia	6,539	10,156	4,828	4,949	0	0	0	0	0	0	1,313	4,999
Zimbabwe	6,394	3,649	3,914	2,200	0	235	0	0	0	62	256	642
Total 1/	1,221,279	645,573	394,174	250,570	90,488	7,754	125,958	95,169	33,122	21,350	96,984	32,348

tons

Angola	204	0	398	0	404	31	2,500	2,452	408	375
Benin	1,924	20,483	0	0	299	496	0	0	1,926	689
Botswana	0	0	1,500	0	0	0	0	0	2,235	0
Burkina	0	0	0	0	29,083	16	0	0	4,702	1,511
Burundi	0	0	0	0	0	0	0	0	772	0
Cameroon	0	5	0	0	9,576	114	0	1,501	2,377	0
CAR	0	0	0	0	0	20	0	0	120	0
Chad	2,482	0	2,499	0	5,000	0	0	0	5,802	304
Congo, P.R.	0	0	0	0	499	383	0	0	0	30
Djibouti	0	172	0	133	0	3,122	0	0	0	0
Ethiopia	108,024	64,851	2,043	259	557	230	0	0	27,753	9,183
Gabon	0	0	0	0	713	401	0	0	0	0
Gambia	143	0	0	0	7,134	7,612	0	0	438	349
Ghana	33,712	23,847	18	2,597	18,522	6,153	0	0	3,503	693
Guinea	4,770	0	0	0	25,778	47,880	0	0	171	0
Ivory Coast	403	12	150	993	1,828	3,348	0	0	441	1,202
Kenya	86,768	69,949	200,490	0	18	16,960	999	999	1,165	55
Lesotho	2,018	1,830	0	0	0	0	0	0	1,457	745
Liberia	13,875	20,877	0	1,242	65,251	81,161	0	0	15	26
Madagascar	0	5,375	0	0	44,380	44,526	1,000	2,196	3,987	731
Malawi	0	1,409	0	0	0	0	1,000	0	0	0
Mali	3,206	500	34,131	18,284	54,140	23,016	0	0	137	200
Mauritania	23,000	272	0	0	365	300	0	0	845	215
Mauritius	0	1,599	0	0	0	195	0	0	3,424	7,291
Mozambique	31,611	60,259	112,085	36,145	32,869	14,699	0	0	18	687
Niger	0	0	62	0	0	0	0	0	0	0
Nigeria	1,473,499	937,171	93,620	0	50	68	37,150	17,439	412	1,556
Rwanda	529	2,759	0	0	938	0	0	0	1,193	1,046
Senegal	1,097	0	76	0	125,051	47,360	689	11,840	2,119	617
Sierra Leone	14,514	17,922	0	0	6,597	32,640	0	0	558	466
Somalia	52,054	36,479	23,818	8,003	16,802	24,584	0	0	13,933	16,128
South Africa	16,671	168,205	245,854	0	65,878	74,983	15,616	12,209	3,785	915
Sudan	504,355	387,560	73	0	214	0	10,187	10,347	13,614	0
Tanzania	144	2,221	0	0	528	100	0	0	8,856	451
Togo	26,302	7,350	473	0	806	470	0	0	1,972	946
Uganda	0	0	0	0	0	0	0	0	263	0
Zaire	113,838	175,302	0	1,368	0	0	0	0	0	0
Zambia	38,377	45,491	0	0	0	0	0	0	2,153	12,862
Zimbabwe	26,900	20,836	0	2,006	0	0	0	200	286	997
Total	2,580,420	2,072,736	717,290	71,030	513,280	430,868	69,141	59,183	110,840	60,270

1/ Total U.S. exports (agricultural and nonagricultural) to Sub-Saharan Africa totaled \$3.757 billion in 1985 and \$2.810 billion in 1986.

SOURCE: Bureau of the Census



U.S. agricultural imports from Sub-Saharan Africa, by value and quantity for selected items, 1985 and 1986

Country	Total 1985	agriculture 1986	Coffee 1985	1986	Sugar 1985	1986	Cocoa and products 1985	1986	Tea 1985	1986	Tobacco 1985	1986
\$ thousand												
Angola	0	1,031	0	1,021	0	0	0	0	0	0	0	0
Benin	0	13	0	0	0	0	0	0	0	0	0	0
Botswana	240	159	0	0	0	0	0	0	0	0	0	0
Burkina	258	86	0	0	0	0	0	0	0	0	0	0
Burundi	1,022	9,748	1,022	9,748	0	0	0	0	0	0	0	0
Cameroon	19,967	24,141	14,183	15,697	0	0	1,259	2,904	3	0	4,507	5,192
CAR	314	46	0	0	0	0	0	0	0	0	295	42
Comoros	6,169	3,360	0	0	0	0	0	0	0	0	0	0
Congo, P.R.	3,289	4,836	0	550	3,289	4,286	0	0	0	0	0	0
Ethiopia	40,671	70,879	33,323	62,763	0	0	0	0	0	0	0	0
Gambia	0	0	0	0	0	0	0	0	0	0	0	0
Ghana	33,935	71,492	33,935	71,492	0	0	33,879	71,358	0	0	0	0
Guinea	1,520	1,247	350	1,155	0	0	0	42	0	25	0	0
Ivory Coast	493,346	393,657	141,659	125,258	3,729	4,709	346,910	260,756	19	0	0	0
Kenya	68,416	113,634	40,650	89,566	5	1	0	0	13,243	10,654	0	0
Lesotho	58	152	0	0	0	0	0	0	33	0	0	0
Liberia	49,314	56,163	1,399	2,276	0	0	0	0	0	0	0	0
Madagascar	49,396	59,733	10,250	9,145	4,777	4,348	0	90	0	0	0	0
Malawi	27,783	16,810	0	147	13,718	4	0	0	2,191	1,841	11,662	14,339
Mali	819	4,138	0	0	166	0	0	0	39	0	0	98
Mauritania	0	24	0	0	0	0	0	0	0	0	0	0
Mauritius	6,971	12,663	0	0	5,487	11,304	79	240	184	176	0	0
Mozambique	14,201	16,218	0	41	4,112	8,617	0	0	1,127	243	0	0
Niger	830	813	0	0	193	0	99	2	0	0	0	0
Nigeria	25,591	7,149	0	0	0	0	23,816	5,088	0	0	0	0
Rwanda	5,640	10,508	1,643	6,991	0	0	0	2,553	2,500	0	0	0
Senegal	160	231	0	0	0	0	0	0	0	0	0	0
Sierra Leone	64	185	0	0	0	0	0	29	0	17	0	0
Somalia	1,072	0	0	0	470	0	0	0	0	0	0	0
South Africa	98,278	67,066	516	815	28,296	15,103	22	1,010	599	333	4,448	1,777
Sudan	2,372	2,827	0	0	0	0	0	0	0	11	0	1
Swaziland	8,364	12,386	0	140	7,887	11,870	40	0	0	0	0	0
Tanzania	7,515	9,700	2,756	6,111	229	815	0	0	496	925	214	340
Togo	2	0	0	0	0	0	0	0	0	0	0	0
Uganda	112,484	132,387	112,429	132,339	0	0	0	0	31	0	0	0
Zaire	5,053	16,266	4,094	14,216	0	0	0	0	0	113	0	0
Zambia	35	230	0	0	0	0	0	0	0	227	0	0
Zimbabwe	9,715	18,249	1,573	3,633	5,874	7,159	0	0	328	232	1,904	7,047
Total	1,094,864	1,38,227	399,782	553,104	78,232	68,216	406,104	341,519	20,846	17,297	23,030	28,836
tons												
Angola	0	0	0	386	0	0	0	0	0	0	0	0
Benin	0	0	0	0	0	0	0	0	0	0	0	0
Botswana	0	0	0	0	0	0	0	0	0	0	0	0
Burkina	0	0	0	0	0	0	0	0	0	0	0	0
Burundi	416	3,171	0	0	0	0	0	0	0	0	0	0
Cameroon	5,518	5,354	0	0	0	0	721	1,782	1	0	774	853
CAR	0	0	0	0	0	0	0	0	0	0	94	13
Comoros	0	0	0	0	0	0	0	0	0	0	0	0
Congo, P.R.	0	251	7,500	10,850	0	0	0	0	0	0	0	0
Ethiopia	11,683	14,573	0	0	0	0	0	0	0	0	0	0
Gambia	0	0	0	0	0	0	0	0	0	0	0	0
Ghana	0	0	0	0	0	0	14,405	30,953	0	0	0	0
Guinea	122	279	0	0	0	0	20	0	20	0	0	0
Ivory Coast	57,056	41,625	10,787	10,874	151,604	118,653	9	0	0	0	0	0
Kenya	15,617	26,417	0	1	0	0	4,151	4,260	0	0	0	0
Lesotho	0	0	0	0	0	0	0	8	0	0	0	0
Liberia	508	725	0	0	0	0	0	0	0	0	0	0
Madagascar	3,917	3,550	10,847	10,900	0	0	17	0	0	0	0	0
Malawi	0	45	35,466	4	0	0	0	934	1,207	4,068	3,990	33
Mali	0	0	91	0	0	0	0	10	0	0	0	0
Mauritania	5,518	5,354	0	0	0	0	0	0	0	0	0	0
Mauritius	0	0	38,443	37,867	18	54	176	177	0	0	0	0
Mozambique	0	17	18,411	19,451	0	0	692	278	0	0	0	0
Niger	0	0	111	0	62	1	0	0	0	0	0	0
Nigeria	0	0	0	0	10,992	2,200	0	0	0	0	0	0
Rwanda	637	2,022	0	0	0	0	993	1,182	0	0	0	0
Senegal	0	0	0	0	0	0	0	0	0	0	0	0
Sierra Leone	0	0	0	0	0	0	17	0	1	0	0	0
Somalia	0	0	9,571	0	0	0	0	0	0	0	0	0
South Africa	215	208	206,837	112,310	21	520	177	305	2,243	1,112	0	0
Sudan	0	0	0	0	0	0	0	5	0	0	0	0
Swaziland	0	20	42,978	56,465	5	0	0	0	0	0	0	0
Tanzania	1,031	1,756	10,502	9,990	0	0	268	536	304	372	0	0
Togo	0	0	0	0	0	0	0	0	0	0	0	0
Uganda	44,327	44,235	0	0	0	0	10	0	0	0	0	0
Zaire	1,619	4,491	0	0	0	0	0	99	0	0	0	0
Zambia	0	0	0	0	0	0	0	128	0	0	0	0
Zimbabwe	584	1,009	13,863	18,045	0	0	0	171	191	718	2,709	0
Total	148,768	155,488	405,407	286,757	177,828	154,217	7,600	8,389	8,201	9,083	0	0

1/ Total U.S. imports (agricultural and nonagricultural) from Sub-Saharan Africa were \$9.441 billion in 1985 and \$8.326 billion in 1986.

SOURCE: Bureau of the Census

## Indices of agricultural production in Sub-Saharan Africa, 1982-86

Country	1982	1983	1984	1985	1986	1982	1983	1984	1985	1986
Total agricultural production					Per capita agricultural production					
						1976-78=100				
Angola	94	92	91	92	92	79	76	74	72	70
Benin	96	95	121	128	128	83	79	98	101	98
Burkina	114	109	109	135	150	103	96	93	113	122
Burundi	106	114	105	112	114	92	96	86	89	89
Cameroon	99	93	105	108	111	86	79	87	87	88
Ethiopia	119	109	98	104	112	110	98	86	91	95
Ghana	87	76	110	96	112	80	66	90	76	85
Guinea	106	105	107	110	115	96	93	91	88	90
Ivory Coast	125	108	149	154	145	102	84	112	112	101
Kenya	112	112	112	119	131	91	88	84	86	91
Liberia	108	110	123	113	117	92	90	98	87	87
Madagascar	105	108	112	113	113	92	91	92	90	88
Malawi	125	122	127	128	125	107	101	102	99	94
Mali	118	112	102	118	114	105	98	87	99	93
Mozambique	109	85	91	97	99	95	72	76	78	78
Niger	117	117	77	108	114	100	96	61	83	85
Nigeria	115	101	113	114	119	98	84	93	91	92
Rwanda	126	135	104	120	126	105	107	80	89	90
Senegal	115	85	96	113	111	98	70	77	88	83
Sierra Leone	104	102	97	103	103	92	87	81	84	82
Rep. So. Africa	107	94	102	108	110	94	80	86	89	88
Sudan	98	101	94	118	111	82	82	74	88	83
Tanzania	108	111	112	116	118	92	91	89	89	88
Togo	118	108	125	125	123	102	90	101	98	93
Uganda	100	107	111	116	119	87	90	91	93	92
Zaire	116	118	116	120	125	100	100	95	92	97
Zambia	98	111	115	128	132	83	91	91	98	98
Zimbabwe	103	90	107	132	125	88	74	85	102	93
Sub-Saharan Africa	111	104	110	115	119	96	88	90	92	92
Sub-Sahara less Rep. So. Africa	112	105	111	116	120	97	89	91	92	93



Indices of food production in Sub-Saharan Africa, 1982-86

Country	1982	1983	1984	1985	1986	1982	1983	1984	1985	1986
	Total food production					Per capita food production				
	1976-78=100									
Angola	101	101	100	101	102	85	83	81	79	78
Benin	95	92	114	122	121	82	77	93	96	92
Burkina	113	107	106	131	146	101	94	91	109	119
Burundi	106	108	102	107	112	93	92	84	86	87
Cameroon	95	94	99	106	107	84	80	82	86	84
Ethiopia	123	111	102	106	114	113	99	89	93	96
Ghana	87	76	110	96	112	80	66	90	76	85
Guinea	106	105	107	110	116	96	93	91	88	91
Ivory Coast	128	125	156	165	155	104	98	117	119	108
Kenya	114	108	95	113	118	93	84	71	81	81
Liberia	116	118	123	123	127	98	97	98	95	95
Madagascar	104	109	108	111	113	90	92	89	88	88
Malawi	125	122	124	125	122	107	101	99	97	92
Mali	120	113	101	117	113	107	98	86	98	92
Mozambique	110	86	93	99	100	96	73	77	81	79
Niger	118	118	77	108	115	101	97	61	83	86
Nigeria	115	101	114	115	120	98	84	93	91	93
Rwanda	126	134	104	120	125	105	107	80	89	89
Senegal	114	85	96	114	112	98	70	76	88	84
Sierra Leone	102	101	96	101	100	90	87	80	82	80
Rep. So. Africa	107	92	102	108	110	94	79	86	88	88
Sudan	98	97	86	117	114	82	78	67	87	85
Tanzania	111	114	118	123	126	95	94	94	96	94
Togo	114	104	120	118	116	98	87	97	93	88
Uganda	100	106	112	117	121	87	90	92	93	93
Zaire	117	119	116	121	125	101	100	95	96	97
Zambia	99	111	110	122	129	84	91	87	93	96
Zimbabwe	101	78	89	123	115	87	65	71	95	86
Sub-Saharan Africa	112	104	109	115	119	97	88	90	92	92
Sub-Sahara less Rep. So. Africa	112	116	110	116	120	97	89	90	92	93

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